L 6910-1 UA
1/24/20

Illinois Business Review
November 1980
Vol. 37 No. 9

Business and Economic Research | Commerce and Business Administration | University of Illinois

Condominium Conversions

ROGER E. CANNADAY AND ANDREA J. HEUSON

The conversion of rental housing units to the condominium form of ownership is an increasingly controversial topic at all levels of government. At the federal level, one congressman recently proposed a three-year nationwide moratorium on condo conversions and establishment of a presidential commission to study the issue. At the state level, in Illinois a bill was recently introduced that would require 15 percent of the units in a building converted to condominum to be reserved as rental apartments. More recently, Illinois created the Joint Legislative Condominium Study Commission which is currently studying the issue. At the local level, the city of Evanston imposed a moratorium on condo conversions from July 1978 until March 1979 (when a new condominium ordinance went into effect) and the city of Chicago declared a 40-day moratorium on condo conversions in March 1979. The Chicago moratorium was subsequently declared unconstitutional by a US district court judge, although temporary moratoriums in other US cities have passed court tests.

Why have condominium conversions led to calls for such drastic measures as moratoriums? Proponents and opponents of such measures often lack objective evidence to support their positions and sometimes resort to emotional appeals. The emotional aspects of the issue are perhaps best illustrated by the term "condomania" that has been coined in the popular press.

Our purpose is to summarize the current information on condominium conversions at the national, state, and local levels and to examine two contrasting views, conversions as a problem versus conversions as a solution to problems. Background on the nature and history of the condominium form of ownership is presented first. Next, the nature and extent of condominium conversions are examined. Then, existing and proposed legislation and the economic rationale related to condo conversions are described. Next, the view of conversions as a problem is examined. Finally, the view of conversions as a solution to problems is presented.

Roger E. Cannaday is assistant professor of finance at the University of Illinois, Urbana-Champaign; Andrea J. Heuson is a graduate student in the Finance Department there.

Nature of Condominium Form of Ownership

Although most condominium conversions are multistory residential properties, the term condominium refers to a particular ownership type, not a structural or property type. While the popular image of condominiums may conjure up visions of highrise or townhouse types of structures, the condominium form of ownership may apply to any type of multifamily structure and occasionally even to detached single-family structures. Further, this form of ownership is not restricted to residential units, but may be used for nonresidential types of properties such as retail, office, and industrial structures.

Of Latin origin, the word condominium essentially means to have control (dominium) over a certain real property in common with (con) one or more other persons. Modern usage refers to individual ownership of individual units and common ownership of common elements. The boundaries of individual units are usually the inside walls, floors, and ceilings. Common elements include the land; improvements such as parking lots, tennis courts, and swimming pools; and areas or components of the building(s) not included in individual units such as hallways, elevators, foundation, roof, and common support systems. Generally, individuals have a fee simple interest (the interest which gives the fullest ownership rights) in their individual units and a tenancy in common interest in the common elements. The interest in the common elements is usually a percentage determined by the ratio that the value of the individual unit bears to the value of the entire property.

The Anatomy of Recent Recessions *By Paul B. Trescott* / *Page 9*

To establish legally the condominium form of ownership, the owner(s) of a given property must submit documents which conform with appropriate state law for public recording. In Illinois, an owner (developer/converter) who has fee simple title files a declaration of condominium along with a plat of survey and bylaws for the condominium association with the office of the county recorder of deeds. The declaration must contain a legal description of the parcel and each unit, and the percentage of ownership interest in the common elements allocated to each unit. The declaration may also contain any other provisions which are deemed appropriate to promote and preserve the concurrent ownership aspects of the venture, and to provide a mechanism for enforcement of the declaration.

Alternatives to the condominium form of home ownership include traditional single-family home ownership and the cooperative. The condominium and cooperative differ in many important respects. The condominium owner has a fee simple interest in his individual unit and has an undivided interest with other unit owners in the common elements. Separate mortgage financing may be arranged by each condominium owner and each sales transaction requires a separate deed along with all the other procedures and documentation required for any sale of real property. In contrast, the owner of a cooperative is most commonly a corporation whose stockholders are the building's tenants. Each tenant owns stock in the corporation and has a leasehold interest in his individual unit, as provided by a proprietary lease (a type of lease that confers rights essentially equivalent to ownership) agreement between the corporation and the tenant-stockholder. The corporation arranges one mortgage to finance the entire cooperative project and there is only one deed. If the tenant-stockholder wants to sell his interest, all he has to do is to sell his stock in the corporation; no sale of real property is involved.

Though it may not be possible to differentiate a condominium complex and a cooperative complex (or a rental apartment complex) on the basis of physical appearance, there are important legal distinctions with economic implications. However, both the cooperative and condominium forms of ownership allow the individual certain tax advantages of home ownership, namely, deductibility of property taxes and the interest portion of mortgage expenses. This is in contrast to those of tenants of traditional rental apartments who are not allowed to deduct a proportional share of property taxes and mortgage interest expense paid by the apartment owner.

History of Condominiums

While the condominium form of ownership has only recently become popular in the United States, it is by no means a new concept. Babylonian documents dating as far back as 2000 B.C. record the sale of the first floor of a house while the owner retained title to the second floor. Condominium ownership was common in Western Europe during the Middle Ages, largely because of a space scarcity within walled cities, leading to the necessity of defining three-dimensional property.

Modern condominium ownership gained momentum in Europe after World War I and again after World War II. Condominiums have become the predominant form of ownership for housing in much of Europe and South America. In the United States, the cooperative form of ownership became popular after World War II and remained the most popular form of joint ownership through the 1960s, particularly in large cities such as New York and Chicago.

The earliest known condominium in the United States was established in New York in 1947. A dozen veterans wanted to purchase an apartment house, using a Veterans Administration (VA) mortgage. However, VA mortgage financing was only permitted on the basis of individual ownership. It was then determined that New York law permitted an individual to own air space, thereby allowing legal delineation of a three-dimensional chunk of that air space. Consequently, the Veterans Administration was persuaded to guarantee a separate mortgage for each of the veterans.

Condominiums in the United States were formally recognized as an ownership type in 1961 when Congress passed legislation authorizing the Federal Housing Administration (FHA) to extend mortgage insurance to loans on condominium units under Section 234 (c) of the National Housing Act. The impetus for this legislation came from Puerto Rico which had passed enabling legislation for condominiums in 1958 and subsequently pressured Congress to find a way to permit FHA financing.

The 1961 federal legislation in turn provided the impetus for states to enact condominium-enabling legislation. By 1969, every state had enacted such legislation, starting with Hawaii in 1961 and ending with Vermont in 1969. The Illinois Condominium Property Act was passed in 1963 and was amended in 1965, 1972, and 1977. The first midwestern condominium development, Fountain View, consisting of two three-story apartment buildings, was marketed in Chicago just prior to enactment of Illinois's Condominium Act. As in New York and many other states, the condominium form of ownership was legal in Illinois prior to the Condominium Act on the basis of the legal recognition of individual ownership of air rights. However, it was not until after specific

Illinois Business Review (ISSN 0019-1922)

Published monthly except January and September

Bureau of Economic and Business Research
University of Illinois
428 Commerce West, Urbana, Illinois 61801

Director, ROBERT W. RESEK; *Assistant to the Director,* WILLIAM R. BRYAN; *Editor,* NELLE WAGNER; *Research Assistants,* THOMAS B. BRYAN, PHILLIP A. CARTWRIGHT, JOHN F. SCHNELL, and RUSSELL SMITH.

The material appearing in the *Illinois Business Review* is derived from various primary sources and compiled by the Bureau of Economic and Business Research. Its chief purpose is to provide businessmen of the State and other interested persons with current information on business conditions. Signed articles represent the personal views of the authors and not necessarily those of the University or the College of Commerce. The *Review* will be sent free on request. Second-class postage paid at Urbana, Illinois.

recognition of the condominium form by state law that its use became popular.

Condominium Conversion Activity

Condominium units are created through the construction of new units, the conversion of existing residential rental units, the conversion of other forms of residential ownership (for example, cooperatives), or the conversion of other types of property (for example, industrial, office, retail, and so on). The focus of this paper is on the conversion of existing residential rental units because this has been the most controversial method of creating condominium units.

Nationwide, the number of conversions increased steadily throughout the 1970s. A recent study of the conversion phenomenon by the Department of Housing and Urban Development (HUD) entitled *The Conversion of Rental Housing to Condominiums and Cooperatives* estimates that 366,000 residential rental units were converted to condominiums (348,000) or cooperatives (18,000) during the decade, with very few conversions prior to 1970. Of these units, only 86,000 (23 percent) were converted during the period from 1970 to 1975. During the next four years, 280,000 units were converted with dramatic increases occurring annually. The study also shows that conversions are primarily a regional phenomenon; 76 percent have taken place in the 37 largest Standard Metropolitan Statistical Areas (SMSAs) and 59 percent have occurred in just 12 of these SMSAs. The Chicago SMSA has more conversions than any other SMSA, accounting for approximately 20 percent of the nation's total. The Washington, D.C. SMSA is a distant second, accounting for 11 percent of the total. In the 37 largest SMSAs, each having one million or more residents, conversions were about evenly split between central cities and suburban areas.

No data are available on the number of condominium conversions in the State of Illinois, but the major share of such conversions have occurred in the city of Chicago and surrounding suburbs. In July 1979, Michael Young and others of Shlaes and Company, published a study entitled *Condominium Conversions in Chicago: Facts and Issues*. This study found that as of December 1978, there were approximately 36,000 condominium units in the city of Chicago. Of these, at least 6,000 units were constructed as condominiums. In 1979, 7,908 units were scheduled for conversion. Therefore, there were approximately 38,000 conversion units in the city as of December 1979. This represents 3.6 percent of the city's total housing units and 5.7 percent of its rental stock. The Shlaes study noted that estimates in the popular press of the total number of conversions have ranged from 30,000 to 100,000 units. This may reflect confusion in distinguishing between the city of Chicago and the Chicago SMSA which includes all of Cook County plus several surrounding counties. The recent HUD study estimates that there have been a total of approximately 70,000 units converted in the Chicago SMSA, with about half of these occurring in the city of Chicago. This is reasonably consistent with the Shlaes study estimate for the city of Chicago.

Conversion is a localized phenomenon within the city of Chicago. The Shlaes study estimates that, since 1976, 80 percent or more of Chicago's conversions have occurred in two townships, Lakeview and Near North. This area encompasses the luxury high-rises of the lakefront and Chicago's Gold Coast. However, conversion has recently spread to neighborhoods immediately adjacent to those on the lakefront. The chart on page 5 shows the distribution of condo conversions in the city of Chicago for the period January 1977 to December 1979.

Existing and Suggested Legislation

At the federal level, there is currently no legislation specifically directed to the regulation of condominium conversions. However, programmatic actions taken by institutions in the federally established secondary mortgage market have certain regulatory effects. For example, underwriting standards set by FNMA and FHLMC provide certain protections to buyers of converted units.

Numerous proposals for federal regulations of condominium conversions have been introduced in the Congress in the past five years. These include the previously mentioned proposal for a three-year nationwide moratorium on conversions. To date, all of these proposals have been defeated. Many of the opponents of such legislation (in both the Senate and the House) have argued that regulation of condo conversions is best left to the states and municipalities most affected.

Almost half of the states have legislated some form of protection for tenants and buyers of converted condominiums. The most frequent protections for tenants are requirements for notice of conversion or lease extensions, and rights to purchase units in a converted building. A number of states have enacted measures to protect condominium buyers, usually in the form of requiring full disclosure of the legal, financial, and physical condition of the project. Several states provide special measures to protect buyers of converted units. In addition, a few states have passed measures to assure a given level of rental stock, to preserve low- and moderate-income housing, and/or to provide special considerations for certain classes of tenants, such as the elderly, handicapped, or families with children.

There is great variation in specific provisions of state legislation related to condo conversions. However, there is a move to standardize state laws on the basis of the Uniform Condominium Act drafted by the National Conference of Commissioners on Uniform Laws and recently approved by the American Bar Association. Several states have this model act under active consideration and two states, West Virginia and Minnesota, enacted it earlier this year.

In the State of Illinois, legislation was recently passed which requires anyone converting rental apartments into condominium units to offer tenants the first chance to buy any unit being converted. The offer of sale and a list of prices for all units must be in writing and good for at least 30 days. Additional provisions are being studied by the Joint Legislative Condominium Study Commission including the possibility of enacting the Uniform Condominium Act.

In the city of Chicago, a city council subcommittee is looking into proposed changes to the existing condominium ordinance, which has been in existence just over 2½ years. The current ordinance requires that tenants of rental apartments being converted to condominium units be given 120 days (180 days if the tenant is over 65 or deaf or blind or unable to walk) after notification of the conversion before having to move. Tenants must also be given the opportunity to buy their converted apartment before it is offered to the general public.

The recent HUD study found that fewer than one in five of the local jurisdictions experiencing conversions have passed any regulatory ordinance. The study also reports that three of every four local chief executives surveyed prefer that neither the state nor the federal government act either to encourage or to discourage conversion. Over 60 percent also said that local governments should avoid such actions. Of those who do see a role for government, a somewhat larger proportion prefers actions that would encourage rather than discourage conversions.

Economic Rationale for Condominium Conversions

The economic rationale for condominium conversions can be approached from both the supply and demand sides. On the supply side, the issue is the profitability of owning rental apartments relative to the profitability of selling the apartments, either directly to the ultimate condominium unit owner or to a converter. On the demand side, and closely related to the profitability question, is the issue of the relative strength of the demand for rental units versus the demand for ownership units, in particular condominium units.

On the supply side, profitability is a function of cash flows related to rental income, operating expenses, mortgage payments, and income taxes, and the net proceeds that could be realized upon sale of the property. In examining the cash flows, it is not sufficient to note that increases in rent are not keeping up with increases in operating expenses. Tax considerations and expectations of appreciation in value may play a major role. If the owner has income from other sources and/or expects rapid appreciation in value, a negative before-tax cash flow on rental apartments may be perfectly acceptable. This is especially the case if losses are merely on paper due to depreciation deductions allowed by the tax laws. A negative after-tax cash flow might even be acceptable for certain investors (with sufficient financial resources to continue to invest in a rental property) if expected appreciation in value is enough to offset the negative cash flows. The key question may become not so much whether or not to sell, but the timing and nature of the sale.

Regarding the timing of the sale, the Internal Revenue Code contains certain provisions that create a disincentive to hold rental property over long periods of time. Current tax laws allow apartment owners to use accelerated depreciation methods. The tax shelter advantages of accelerated depreciation diminish as the property ages. Likewise, the interest expense portion of typical mortgage payments, another tax-deductible item, decreases over time. As these two key tax-deductible items decrease, there is greater and greater incentive to sell the property.

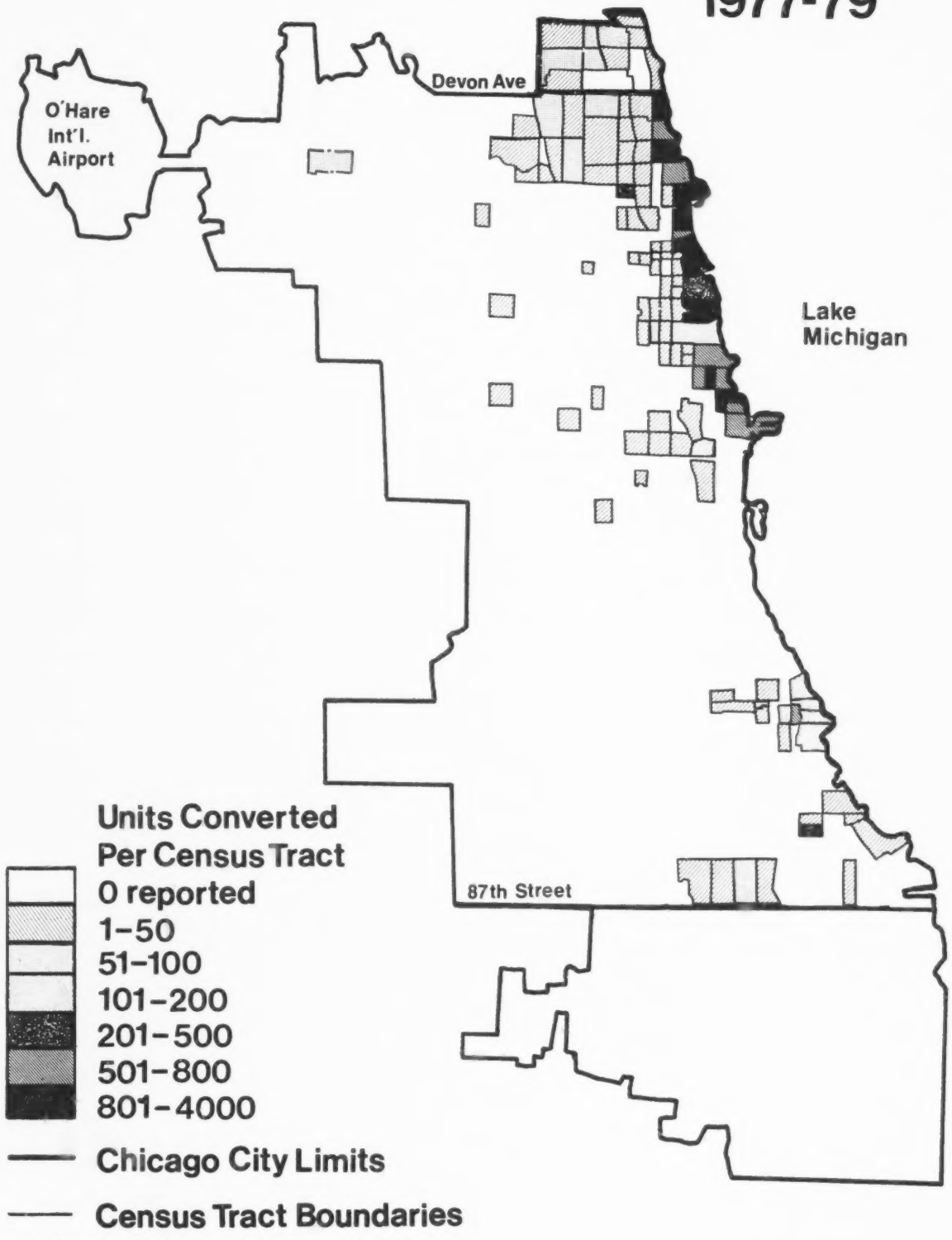
Regarding the nature of the sale of the property, the apartment owner has a choice between two major options. He may undertake the conversion process himself and sell the individual units as condominiums. Alternatively, he may sell the entire property, as rental units, to a converter who will undertake the conversion process. In most cases, the second option is preferred, since gain from the sale of individual units is taxed as ordinary income while gain from the sale of the entire property may be taxed as a capital gain if certain conditions are met.

The conversion phenomenon could not take place at current magnitudes successfully, if a demand for the units did not exist. The United States is changing from a nation of renters to a nation of homeowners. Only 43.6 percent of the country's total housing units were owner-occupied in 1940, compared with 64.8 percent by 1977. Much of the conversion activity is taking place in areas where the percentage of ownership is less than the national average. This is true, for example, in the city of Chicago, a national leader in conversion activity. Demand for condominium units has increased rapidly for several reasons, including (1) demographic trends, (2) perceived economic benefits related to inflation and federal income tax policies, (3) the combination of advantages of home ownership (as for single-family detached units) with the attractions of a lifestyle offered by multifamily units, and (4) the search for investment opportunities.

Certain demographic trends are generally considered to be related to the increase in demand for condominium units. Average household size has been declining steadily for many years in the US. This is attributed to several factors, including a decline in fertility rates and an increase in divorce rates. Single-person and two-person childless households are a rapidly increasing segment of total households. This trend to smaller households has contributed to a shift in demand toward smaller housing units such as condominiums.

It is widely believed that home ownership provides certain economic benefits, especially during times of rapid inflation. The HUD study reports that about two-thirds of all buyers of converted units name economic factors as the primary reason for buying. Many view their purchase as a hedge against inflation, expecting the value of their units to appreciate more rapidly than inflation. Others cite the fact that mortgage interest and property taxes paid by a unit owner are deductible for federal tax purposes while the rent paid by a unit renter is not deductible. Therefore, although before-tax housing expenditures often rise with the purchase of a condominium (the HUD study suggests an average increase of 36 percent for tenant buyers and 62 percent for "outside" purchasers), after-tax expenditures may remain constant, or even decrease, depending upon the owner's tax bracket. During inflationary periods, increases in nominal income push individuals into higher tax brackets, even though real incomes may not increase at all, or may possibly even decrease.

Condo Conversions in Chicago, 1977-79



Bureau of Economic and Business Research, based on data from HUD survey.

In addition to the perceived economic benefits of home ownership, most condominium developments also offer the attractions of multifamily living. Compared with single-family detached homes, the location is usually more central, offering greater accessibility to more activities. Amenities such as swimming pools, tennis courts, and other recreational facilities are available to many people who could not afford to provide them on an individual basis. Many activities required for maintenance and daily operation are handled by professionals. Condominium associations often purchase goods and services (such as cleaning and exterminating) in bulk and are thus able to obtain quantity discounts.

The investment motive is quite strong as well. Indeed, the HUD study estimates that 37 percent of the occupants in converted buildings are renters. The units are owned by the converter/developer or other investors. The HUD study estimates that a unit owner with $39,000 annual income can expect a 20 to 22 percent annual return on the investment in his unit. Tenant buyers often benefit from initial-offering discounts of 20 to 30 percent; that is, wholesale prices. Units purchased may then be later sold at retail.

Conversions As a Problem

Among the problems cited frequently by opponents of condominium conversions are the sudden displacement of tenants (particularly the elderly), high increases in rent for displaced tenants, and exacerbation of rental housing scarcity. Each of these perceived problems is addressed in turn.

An analysis of tenant displacement must take into account the fact that tenants are a mobile group — many would have moved without the conversion process. The Shlaes study estimates that, in Chicago, during the period from 1963 to 1977, some 7,500–11,250 citizens (less than 1 percent of the total housing units in the city) did not choose to buy their units and also would not have moved out in the ordinary course of events. On a national basis, HUD defines displacement as the forced acceptance of similar- or lower-quality housing at a higher cost or lower-quality housing at equal cost. The HUD study includes an estimate that 10 percent of those individuals who resided in converted buildings have been at least temporarily displaced. However, 90 percent of former residents of converted buildings responded to a HUD survey that they were satisfied with their new units and buildings. While 72 percent of former residents no longer live in their preconversion neighborhoods, 85 percent of those who did switch neighborhoods responded that the new one was as good or better than the old one. For former residents who continue to rent, the median change in total housing costs per household is an increase of 8 percent. At the extremes, 28 percent of former residents who still rent pay at least 25 percent more in housing costs, while 30 percent actually pay less.

As to the contention that condominium conversions contribute to rental housing scarcity, the HUD study states that there is no evidence that conversions are concentrated in areas with lower-than-average vacancy rates. The study estimates that on average, nationwide, every 100 units converted effectively decreases the existing rental stock, relative to demand, by only 5 units (tenants who purchase reduce the demand for rental units, outside purchasers may move from other apartments, and purchasers may offer their units as rentals). It appears that opponents of condominium conversions are mistaken if they think that conversions have substantially reduced the supply of residential rental units relative to the demand for such units.

Conversions As a Solution to Problems

Advocates of condominium conversions view the conversion phenomenon as a solution to many urban problems. Conversions revitalize central cities by recycling old buildings. Conversions stabilize neighborhoods by decreasing abandonment and other forms of owner disinvestment, such as failure to keep up with the needed repairs and maintenance. Conversions allow home ownership for a greater number of people, giving them a stake in the society and thereby reducing the number of potential rioters, vandals, and arsonists. Conversions increase the property tax base for affected jurisdictions, since the market value of the property after conversion is generally higher than it was before conversion. To the extent that conversion of multifamily rental units replaces construction of traditional single-family detached homes, more efficient land and energy use may result.

If strong advocates of conversions are guilty of "condophilia" and opponents are possessed of "condophobia," there are many others who take a middle ground and argue that things should be left to market forces. They contend that public policy should be neutral, providing neither incentives nor disincentives for conversions.

Illinois Business Indexes

Item	August 1980	July 1980	June 1980	May 1980	August 1979
Leading indicator (1969=100)	82.0	80.5	79.6	80.1	94.0
Coincident indicator (1969=100)	123.1	122.8	122.1	122.6	156.0
Employment - manufacturing (in thousands)	1,181.0	1,178.9	1,207.2	1,213.4	1,287.6
Average weekly hours - manufacturing	38.9	38.4	39.3	39.4	40.9
Weekly earnings - manufacturing	$314.70	$311.81	$314.01	$311.26	$301.87
Layoff rate - Chicago	1.0	1.3	1.6	1.6	.6
Help Wanted Advertising-Chicago (1967=100)[1]	68.0	68.0	69.0	67.0	96.0
Help Wanted Advertising-St. Louis (1967=100)[1]	54.0	52.0	56.0	58.0	78.0
Ordinary life insurance sales (in millions)	$1,406	$1,581	$1,648	$1,632	$1,511
Retail sales (in millions)	n.a.	$3,822	$3,806	$4,037	$4,042
Coal production (in thousands of tons)	5,228	4,070	5,246	5,585	5,535
Petroleum production (in thousands of barrels)	1,890	1,900	1,799	1,929	1,912
Vender performance (percent)	33.0	30.8	25.9	30.2	51.1
Building permits (in thousands)					
Residential housing units	2.63	2.85	1.70	1.15	4.54
Value of residential housing	$111,536	$107,752	$71,587	$52,525	$191,514
Value of nonresidential housing					
Industrial buildings	$19,868	$20,400	$28,095	$25,756	$39,031
Office, banks, and professional buildings	$19,332	$58,029	$34,404	$25,861	$59,559
Stores and other mercantile buildings	$13,496	$21,281	$32,622	$34,482	$27,375
Other	$34,955	$30,708	$41,004	$40,168	$111,924
Consumer price index					
North Central US	134.9	-	134.7	-	120.3
North Central/population more than 4,000,000	136.8	-	136.7	-	121.0
North Central/population 385,000 to 1,250,000	134.7	-	134.4	-	120.5
North Central/population 75,000 to 385,000	132.9	-	131.9	-	119.0
North Central/population less than 75,000	131.7	-	128.7	-	119.5
Chicago	245.2	246.8	248.2	243.1	218.6
St. Louis	-	245.0	-	241.8	-
Prices received by farmers	129	121	110	105	116
	1980:I	1979:IV	1979:III	1979:II	1979:I
Personal income (in millions)	$116,977	$114,130	$112,234	$108,287	$106,555

Sources available upon request. [1]Source: The Conference Board, *Help Wanted Advertising*, August 1980.
n.a. not available.

The following US Department of Commerce, Bureau of Economic Analysis, data are available: 1973–78 personal income data for US, Illinois, and Illinois counties; 1973–78 employment data for US, Illinois SMSAs, and Illinois counties; and 1969–77 farm income and expenditures data for US, Illinois, and Illinois counties. To obtain the data, write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Urbana, Illinois 61801. The charge is $20 for each set to cover reproduction and handling costs. Individual county pages are $1 each with a $5 minimum charge.

Comparative Economic Data for Selected Illinois Cities, August 1980

	Building permits (000)		Electric power consumption (000,000 kwh)		Postal receipts (000)		Employment (000)		Estimated work force unemployed (percent)	
	Aug. 1980	% change from Aug. 1979	Aug. 1980	% change from Aug. 1979	Aug. 1980	% change from Aug. 1979	Aug. 1980	% change from Aug. 1979	Aug. 1980	Aug. 1979
ILLINOIS	$73,470[a]	-41.8	3,524.9[a]	+2.2	$52,929[a]	+3.0	4,958.0	-3.7	8.4	4.7
NORTHERN ILLINOIS										
Chicago	$37,113	-57.8	1,667.7	+1.7	41,470	+1.7	3,127.6[b]	-2.8	8.0[b]	4.5[b]
Aurora	943	-57.5	112.1	-29.2	576	-3.7	35.8	-2.7	9.8	3.8
Elgin	1,520	-42.0	89.8	-1.5	672	+12.6	27.6	-2.8	9.2	4.2
Joliet	414	-81.4	368.4	-6.4	376	+1.4	34.3[b]	-2.6	13.1[b]	6.2[b]
Kankakee	653	-38.3	82.3[c]	+7.2	348	+54.7	36.4	-5.9	11.7	6.9
Rock Island-Moline	2,552	-25.1	141.8[d]	+10.1	1,741	+29.4	98.8[e]	-8.3	8.6[e]	3.7[e]
Rockford	4,152	+30.9	163.6	+7.7	971	-0.6	118.7[b]	-9.6	10.7[b]	4.6[b]
CENTRAL ILLINOIS										
Bloomington-Normal	3,141	-2.9	55.4	+12.4	1,057	+13.3	53.1[b]	-4.8	5.9[b]	2.6[b]
Champaign-Urbana	915	-39.0	60.4	+10.2	533	-20.3	71.6[b]	-7.0	5.7[b]	3.7[b]
Danville	1,394	-37.2	47.6	+7.7	227	-2.6	16.6	-8.8	15.4	7.7
Decatur	1,350	-30.1	135.5	+6.3	516	+1.2	52.5[b]	-4.2	11.8[b]	5.9[b]
Galesburg	461	-54.2	31.8[c]	+3.6	166	-7.3	13.7	-7.4	13.2	6.2
Peoria	1,049	-66.4	210.8	+8.2	1,501	+0.2	160.1[b]	-5.4	8.0[b]	3.8[b]
Quincy	323	-66.3	42.9	+3.4	270	+19.5	18.5	-1.1	9.9	4.8
Springfield	13,076	+183.3	137.7	+12.7	1,884	-0.4	89.5[b]	-5.1	7.2[b]	4.6[b]
SOUTHERN ILLINOIS										
East St. Louis	1,137	+643.1	26.8	+17.5	202	+4.7	21.4	-5.7	14.5	11.0
Alton	1,078	+28.5	79.5	+3.7	169	+20.7	13.4	-5.6	13.9	7.6
Belleville	1,851	+306.8	31.4	-9.3	469	+40.0	16.9	-5.6	12.8	10.0
Carbondale-Murphysboro	348	-19.0	40.0	+18.7	354	+8.6	11.1[f]	0.0	7.3[f]	5.9[f]

[a]Total for cities listed. [b]Data for Standard Metropolitan Statistical Area. [c]Includes immediately surrounding territory. [d]Includes East Moline. [e]Illinois portion of Davenport-Rock Island Moline SMSA. [f]Data for city of Carbondale.

The Anatomy of Recent Recissions

PAUL B. TRESCOTT

After being long predicted, the recession of 1980 finally materialized. Coming as it did in a highly inflationary environment, the recession raises important questions. What policy actions are appropriate to alleviate the fall in output and rise in unemployment? Will antirecession measures cast the economy back into the excess of double-digit inflation and double-digit interest rates? To what extent has the recession been brought on by the preceding inflation itself, or by measures (such as monetary restraint) undertaken to try to bring down the rate of price increases? The recession also reminds economists of some uncomfortable feelings about their own inherited wisdom. How can prices continue to rise so much when output is falling and unemployment is rising?

In what follows, some of these issues are explored by developing the following points: (1) The current recession shows much similarity to the recession of 1974–75; and (2) Both recessions need to be interpreted with a view toward the supply side of the economy (particularly the labor market) as well as the demand side.

My analysis proceeds in terms of a traditional economic approach which has enjoyed a recent revival — looking at schedules of aggregate supply of, and aggregate demand for, goods and services. Aggregate supply and demand analysis was largely initiated by John Maynard Keynes's *General Theory* (1936), but the revival has been largely at the hands of monetarists. For instance, a recent article by Keith Carlson of the Federal Reserve Bank of St. Louis applies aggregate supply-demand analysis to the economy's slowdown in 1979. ("Explaining the Economic Slowdown of 1979: A Supply and Demand Approach," FRB StL, *Review*, October 1979).

The following comments follow his views at some points, but differ on some important issues.

The aggregate demand schedule expresses the quantity of goods and services which people will buy as a (negative) function of the price level. Each aggregate demand schedule is drawn for some specific value of the quantity of money (or the quantity of the monetary base) and is constrained by that monetary variable. A rise in prices, other things equal, raises people's desired money holdings, and in the effort to increase those holdings, people will cut back on their purchases of goods and services. Thus the aggregate demand curve is downward sloping. Because of its link to the money supply, the aggregate demand schedule will tend to increase over time at a rate which is influenced by the rate of monetary growth, subject, of course, to fluctuations arising from disturbances in particular categories of expenditures such as business investment and fiscal policy. We can measure the rate of monetary growth by looking at the change in the stock of high-powered money (currency plus bank reserve deposits at the Federal Reserve), adjusted to incorporate the dollar equivalent of changes in legal reserve requirements (I denote this as HPMA). The rate of increase of aggregate demand can be measured by changes in gross national product (GNP) in current prices. Historically, changes in the ongoing growth rate of HPMA have tended, after a lag of about two quarters, to be reflected in similar changes in the ongoing rate of increase of GNP. To illustrate, between 1960-IV and 1970-II, HPMA increased at an annual average rate of 5.1 percent. GNP, expenditures measured two quarters later, grew at an average annual rate of 6.7 percent. In contrast, from 1970-II to 1979-IV, HPMA grew at an annual average rate of 8.0 percent, and GNP expenditures, beginning two quarters later but ending with 1970-IV, grew at 10 percent per year. Thus a step-up of 2.9 percent in the monetary growth rate led to a step-up of 3.3 percent in the growth rate of aggregate demand.

The impact of changes in aggregate demand on output and prices depends on the character of the aggregate supply schedule. In the Keynesian view, the aggregate supply curve is likely to be upward sloping, becoming increasingly steep as the economy approaches "full employment." The curve historically has tended to shift gradually to the right (increase) with increase in supplies of capital and labor, improvements in labor-force quality, and technological improvement. The Keynesian aggregate supply schedule depends on the level of money wages, which are treated as an exogenous force. A rise in money wages shifts the aggregate supply curve to the left; so does a rise in the price of imported petroleum.

The Keynesian view has traditionally relied on the measured rate of unemployment as an indicator of labor-market disequilibrium and, by inference, an indicator of deficiency in aggregate demand. On the assumption that "full employment" meant measured unemployment of 4 or 5 percent, many observers concluded that the economy was usually operating below "full employment."

These traditional views have come under challenge for a variety of reasons. Some monetarists have argued that, if one allows time for adjustment, the aggregate supply curve can best be viewed as vertical. That is, the amount of output supplied will, in the long run, not be a function of the general price level. In this view, money wage rates are prices which behave in a manner very similar to product prices; thus wages cannot be viewed as an exogenous or shift-variable. The conception underlying the vertical aggregate supply curve is a very old one. It reflects the idea that the economy possesses a relatively unique "real" configuration which is not substan-

Paul B. Trescott is professor of economics at Southern Illinois University. His books on monetary topics include *Money, Banking, and Economic Welfare, Financing American Enterprise,* and *Thailand's Monetary Experience.* He will be teaching at the University of Illinois this coming spring.

TABLE 1. Employment Rate and Unemployment Rate, 1950-79

Dates	Employment rate	Unemployment rate
1950-54	55.1%	4.0%
1955-59	55.2	5.0
1960-64	54.4	5.7
1965-69	55.8	3.8
1970-74	56.3	5.4
1975-79	57.3	7.0
1979 alone	59.2	5.8

Source: Economic Report of the President, 1980, p. 234. The employment rate is the ratio of civilian employment to the noninstitutional population. The unemployment rate is the ratio of unemployed to civilian labor force.

tially altered by changes in monetary conditions and the general price level. Individual prices and wages are believed to be sufficiently flexible that the economy will remain close to this unique configuration. In particular, this view is that labor markets will tend to equilibrate through wage-rate adjustments, while the Keynesian view has always stressed a failure of the labor market to adjust. We can term the vertical aggregate supply curve the LME (labor-market equilibrium) aggregate supply. Over time it tends to shift to the right with increase in the stock of capital goods, the size and quality of the labor force, and improvements in technology. Reductions in the supply of imported petroleum have shifted the curve to the left, decreasing supply.

While the LME aggregate supply curve represents a position toward which market forces will push the economy, that does not mean that we are always at the equilibrium position. The economy's output can diverge in either direction from the LME output level. That is, we can be producing *more* than the long-run LME supply schedule indicated, as well as less.

The concept of a LME aggregate supply schedule for output is closely related to the idea that there is a "natural rate of unemployment." Milton Friedman, who coined the term, identified it as the "level of unemployment which . . . is consistent with equilibrium in the structure of *real* wage rates. . . . A lower level of unemployment is an indication that there is an excess demand for labor that will produce upward pressure on real wage rates. A higher level of unemployment is an indication that there is an excess supply of labor that will produce downward pressure on real wage rates" ("The Role of Monetary Policy," *American Economic Review* (May 1968), reprinted in Gibson and Kaufman, eds., *Monetary Economics,* 1971, p. 173).

Though Friedman himself stressed the potential variability of the "natural rate," the term has an unfortunate tendency to imply both stability and desirability. In truth, the "natural rate" appears to have undergone substantial variation during the 1960s and 1970s. We need to examine this more closely in order to determine, as well as we can, when the economy is operating above its LME output — that is, when the unemployment rate is below the "natural rate."

Unemployment is measured by people's responses to survey questions, such as "Did you work last week?" and "Are you looking for work?" Because of their responses, people may be classified as unemployed who in fact are unwilling or unable to take the jobs which are available. In contrast, employment is measured transactionally — that is, the number of people who are employed can be determined from employer records. The employment rate, then, may be a more reliable measure of labor-market conditions than the unemployment rate. If we compare the cyclical behavior of the employment rate (the ratio of civilian employment to the "noninstitutional population" aged 16 and over) with the unemployment rate, they show very similar ups and downs for most of the period since the 1940s. But their average values have shown a surprising degree of divergence in the 1970s. Table 1 shows five-year averages for the employment rate and the unemployment rate since 1950. These data indicate that during the 1950s and 1960s, the trend value of the employment rate was remarkably stable in the neighborhood of 55 percent. But in the 1970s, when the unemployment rate was going up, the employment rate was also rising. In 1979, when some economists were still interpreting 5.8 percent unemployed as evidence the economy was not operating at capacity, the employment rate reached a record-breaking 59.2 percent.

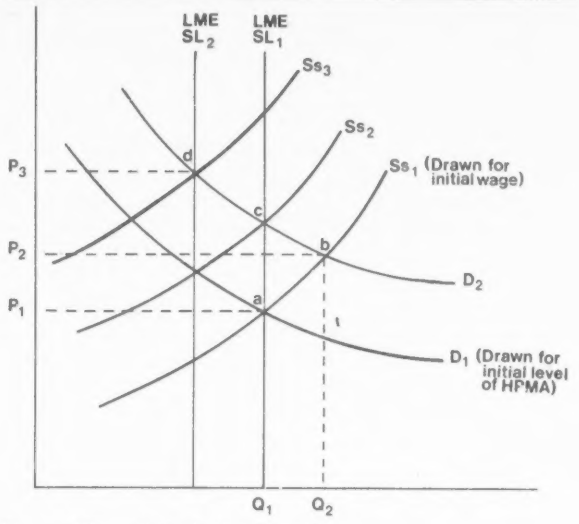
One interpretation of these developments is that there has occurred increased labor force participation by people who have always had above-average unemployment rates — teenagers, women, ethnic minorities. But to one schooled in the principle that "nature does not make leaps," the shifting relation between employment and unemployment in the 1970s requires further explanation. Four further considerations can be noted, as follows:

(1) The unemployment rate is sensitive to the draft. The periods of very low unemployment in the table are 1950–54 and 1965–69, both periods when the US was involved in Asian wars and when draft calls were heavy. Reduction in draft calls helps explain why unemployment rose in 1955–60 and 1970–75.

(2) Many people counted as unemployed are receiving transfer payments from the government. The terms of these transfer programs have become increasingly generous, diminishing the cost of unemployment and reducing the incentive to take the available jobs.

(3) In the early 1970s, the government imposed new requirements on beneficiaries of certain transfer payments, requiring that they register as unemployed. Many of them did so, although they were often not able or willing to accept available unemployment. Many were mothers with dependent children, whose child-raising responsibilities gave them a legitimate reason for not being employed. By counting such persons as in the labor force and unemployed, both labor force and unemployment are overstated. (See Kenneth W. Clarkson and Roger E. Meiners, "Government Statistics as a Guide to Economic Policy: Food Stamps and the Spurious Increase in the Unemployment Rates," *Policy Review,* Summer 1977.)

(4) Increases in the statutory minimum wage have made it increasingly difficult for low-productivity workers to find employment.



Bureau of Economic and Business Research

All of these labor-force matters need to be reviewed in order to answer the question, what has happened to the "natural rate" of unemployment? The answer is that it has increased, and probably to a level on the order of the 7 percent average maintained in 1975–79. If true, this has some important implications. Most important, of course, is that if the government resorts to demand stimulus in an effort to drive the measured unemployment rate below its LME level, accelerating inflation can result. This appears to have been a contributing cause of the rising inflation of the 1970s.

These labor-market considerations also have important implications for the causes of recession in the 1970s. If strong demand stimulation moves the economy to levels of output and employment which are in excess of the LME levels on the vertical aggregate supply curve, self-correcting tendencies will build up tending to move the system closer to the LME position. In particular, as Friedman noted, "real" wage rates will tend to increase (beyond productivity growth), reducing the demand for labor and pressing output downward. Such a self-correcting tendency can be averted, and the economy kept above LME output, if increases in aggregate demand become larger and larger. But of course this means accelerating inflation.

If increases in aggregate demand become smaller, or even if they are held at a constant percentage rate, a recession may occur because of the self-correcting impulses just noted.

Whatever recessionary tendencies have inhered in these labor-market relationships were aggrevated by the fact that, as Carlson has noted, the LME aggregate supply schedule itself was reduced by the sharp increases in prices of imported petroleum products. When the LME aggregate supply curve shifted to the left, the self-correcting forces tending to pull down output and employment became stronger.

The chart expresses some of these relationships in oversimplified form. The economy is assumed to begin at point *a*, which lies on both the long-run (LME) and short-run (Keynesian) aggregate supply curves. Growth in high-powered money shifts the aggregate demand curve to the right, from D_1 to D_2. Producers expand output, mainly by increasing hours worked and increasing the intensity of work for the people already on their payrolls. The economy moves to point *b*, experiencing some price increases, chiefly in agriculture and raw materials where output is inelastic. The increase in output created a disequilibrium. The higher output Q_2 could only be sustained (if at all) by increasing the real wage paid to the workers. But in fact the real wage has fallen, since money wages are unchanged and prices are higher. The amount of labor supplied will tend to fall, and money wages will tend to be bid up. These tendencies will force prices to rise more, while diminishing output. The economy will turn northwest from point *b*. A phase of apparent stagflation will set in, which is in reality a response to pressures toward labor-market equilibrium. The decline in output could be postponed if aggregate demand were raised still further, but that would accelerate the inflation.

With a higher money wage, the short-run aggregate supply curve shifts vertically to Ss_2. If there were no changes in the long-run aggregate supply schedule, the economy would head for point *c*, where the original out-

TABLE 2. Comparative Data for the Recessions of 1974-75 and 1979-80

Year and Quarter	Annual rate of change from previous year: HPMA	Bank reserves	Nominal GNP	Real GNP	Unemployment	Federal funds interest rate
1973-I	8.5%	10.3%	11.6%	7.6%	5.0%	6.5%
II	8.6	8.7	10.8	5.8	4.9	7.8
III	8.7	9.1	10.9	4.7	4.8	10.6
IV	7.9	7.7	10.6	3.4	4.8	10.0
1974-I	7.8	6.6	7.9	-0.1	5.2	9.3
II	8.2	7.1	8.3	0	5.1	11.3
III	8.1	6.7	8.2	-1.5	5.5	12.1
1978-III	9.0	8.0	11.2	3.8	6.0	8.1
IV	9.1	8.2	12.6	4.7	5.8	9.6
1979-I	8.2	5.2	13.0	4.5	5.7	10.1
II	7.6	4.1	10.2	1.9	5.8	10.2
III	7.9	4.2	10.4	1.9	5.8	10.9
IV	7.8	5.2	9.5	1.0	5.9	13.6
1980-I	8.2	6.7	9.5	1.0	6.1	15.0
II	8.0	6.6	7.9	-0.8	7.5	12.7

Sources: Worksheet data from Federal Reserve Bank of St. Louis and Federal Reserve Bulletin.

Second-class postage paid at Urbana, Illinois

Economic and Business Research
428 Commerce West
Urbana, Illinois 61801

MR EDWARD KIANKA
ACQUISITIONS EDITOR
CONGRESSIONAL INFO SERV INC
7101 WISCONSIN AVE
WASHINGTON, DC 20014

put Q_1 would again be produced. Because of cumulative factors operating in the short run, there might be overshooting, with output falling temporarily below Q_1. However, the problem is aggravated by the fact that the curtailment of petroleum supply has shifted the long-run supply curve to the left. (This would also aggravate the rise of the short-run supply curve, shifting to Ss_3.) So there is strong pressure for the economy to move toward point *d*, again with the possibility of overshooting. The problem is reduced to the extent that factors making for growth and higher productivity can shift the long-run aggregate supply curve to the right.

We now have the making of an analytical framework which seems to fit pretty well the recession of 1974–75 as well as that of 1980. Relevant data are summarized in Table 2. In each case, the economy had been operating at high pressure in terms of monetary growth and the growth in aggregate demand, as measured by nominal GNP. Prices were rising rapidly. The unemployment rates were sufficiently low that we can infer that output and employment were above LME aggregate supply. In both 1973 and 1979, real GNP measured quarterly was virtually level over the year.

In each case, the Federal Reserve initiated a slowdown in the rate of growth of high-powered money, the peaks being 1973-III and 1978-IV. Measured by the annual rate of growth of HPMA, the slowdowns were both extremely mild. However, the growth rate of bank reserves fell considerably more than the growth rate of HPMA in both cases. This reflects the fact that currency continued to grow rapidly, keeping pace with rapidly rising nominal income. This configuration has a tendency to produce a "credit crunch," because of the pressure on bank reserves. Money market interest rates, such as the federal funds rate, rose to extremely high levels. These developments created the impression that monetary policy was being extremely restrictive when in fact the slowdown in growth of high-powered money was extremely mild. Pressure increased in large part because of the continued high rate of increase of nominal GNP and thus of demand for both currency and bank credit.

In each case, however, the rate of growth of nominal GNP soon began to decline. Of course, nominal GNP was still growing rapidly. But with its rate of increase slackening, the self-correcting forces depicted in the chart came into appearance, forcing output down despite rising demand. These were greatly aggravated in each case by the shock of reduced supplies and greatly increased prices of imported petroleum. These developments hit hard in 1973-IV and 1979-II. Decreased petroleum supplies reduced output and employment directly, and also aggravated price increases. The sharp price increases meant a decrease in the amount of goods and services people could afford to buy with any given amount of money. Viewed in labor-market terms, the rise in petroleum price decreased the real marginal productivity of labor, causing a decrease in the amount of employment offered at any given level of real wages. This fall in the real demand curve for labor meant that the degree of labor-market disequilibrium already in existence was substantially aggravated.

The interpretation I have presented combines a number of factors. To see the anatomy of recent recessions, one needs to look at both the demand and supply sides of the market for goods and services. Traditional economics stressed the fluctuations arising from the demand side, assuming that supply would be, in the short run, largely a passive, adapting force. In the recent recessions, however, aggregate demand has not fallen, judged by GNP in current prices. On a quarterly basis, the US has not had a decrease in aggregate demand since 1960.

The analysis also casts doubt on the advisability of resorting to strong measures of demand stimulation as a means of moving the economy back to "full employment." With the growth rate of HPMA at 8.2 percent for the year ending 1980-I, monetary policy is still a highly inflationary role. With that much monetary growth, it is unlikely that demand for goods and services will fail to grow. The slackening in growth of bank reserves has tended to be transitory, not a condition which calls for offsetting by accelerated growth of HPMA.

This analysis does not imply that measured unemployment rates on the order of 7 percent are either inevitable or desirable. But unemployment on that order is largely a microeconomic phenomenon. Experience indicates that employers will hire workers when it is profitable to do so. If the government moves again to force output and employment above their long-run equilibrium levels, as occurred in 1973 and 1979, another bout of severe inflation is in store.

U6910-1-U

Illinois Business Review

December 1980
Vol. 37 No. 10

Business and Economic Research | Commerce and Business Administration | University of Illinois

"Are We Losing Ground?" The Answer Is Yes

ILLINOIS DEPARTMENT OF AGRICULTURE, DIVISION OF NATURAL RESOURCES

A recent difference of opinion between a certain United Nations researcher Erik Eckholm and an equally certain University of Illinois economics professor Julian Simon over the need for agricultural land preservation has been brought to the attention of the IDOA Division of Natural Resources (DNR) for comment.

The DNR cannot support the claims of either work because of what we view as questionable logic applied to factual materials in each instance. Neither work seems to us to be based on correct interpretation of agricultural economics or statistical economic prediction as claimed. Instead, both mislead readers about trends in available land through manipulation of available facts.

This rebuttal by DNR researchers is an attempt to define the real sociopolitical impact of farmland conversion in Illinois with more site-specific examples and their impact for Illinois.

Analysis

The Simon article attempts to refute the Eckholm claim that, on the whole, we are losing farmland in the world. United Nations statistics are used in more philosophic than economic arguments to accomplish this end. Given the estimated credibility of the figures, this may have been a good idea. However, misinformation is still created in the Simon article when world trends of questionable validity are applied to the North American corn belt directly and Illinois specifically. This slippery slope argument is irrational and unreliable.

The application of generalities is most evident in two areas of Simon's research. First, instead of lumping together world agriculture under one philosophy, we must draw economic distinction between primitive slash-and-burn farming and high-technology agribusiness. Second, in Illinois we also have the effects of a voracious economy constantly competing for land resources. There is no room here for a comparison with subsistence level development as it governs the use of energy and land resources in poorer nations.

The inappropriate comparisons give the Simon article the dialectics needed to state his opinions. Hopefully, this report will explicitly state DNR's opinions for analysis in a more straightforward manner. If we can identify and solve our own problems in this area, then we can justify discussion of its effects on world trends. However, the cart cannot come before the horse.

This position paper was prepared by the staff of the Illinois Department of Agriculture, Division of Natural Resources, in response to the article, "Are We Losing Ground?" by Julian L. Simon, which appeared in our April 1980 issue.

The 100,000-Acre Illinois Conversion Figure

The Soil Conservation Service (SCS) has used agricultural census figures in developing its estimate of farmland conversion. This figure of 100,000 acres per year is accepted and supported by the governor of Illinois, the Illinois State Chamber of Commerce, the Rural Revitalization Committee, the Illinois Department of Agriculture, the Department of Commerce and Community Affairs, the Task Force on the Future of Illinois, and many other state and federal agencies and private groups.

The SCS used two inventories to compile the conversion figure. They were the 1967 *Conservation Needs Inventory* and the *National Resource Inventory* of 1977. In each study, agricultural lands were specifically defined by SCS. The total difference (due to development) was determined and divided by 10 to reach the initial figure of 137,826 acres per year. Both inventories are as accurate as the 4,500-field consultation operations involved. The 37,826-acre figure subtracted from the original figure takes into account the addition of pastureland

The Unemployment Rate Reconsidered *By Phillip Cartwright* / *Page 6*

JAN 08 1981

to cropping acreage and other smaller variables in conversion that are not valued. Warren Fitzgerald, SCS state conservationist, competently defended this figure at the Governor's Conference on the Preservation of Agricultural Lands.

The Division of Natural Resources is also engaged in a cross-referencing of this figure through county tax records. So far, research has shown that this figure may be too low.

On the final report for 1980 by the Task Force on the Future of Illinois, the farmland conversion trend was also considered: Page 103 — "If present trends continue until 2000, at least 2.3 million more acres of farmland, an area equal to the size of Connecticut, will be converted to non-farm uses.

"By the year 2000, Illinois Farmland will reach its capacity for absorbing more crop acreage and, according to University of Illinois economists, even increased yields per acre will no longer be able to compensate for farmland losses."

Here are a few of the actual dollars and cents meanings of these trends as they are impacting the Illinois economy now, and in future projectives: (1) The remaining land in production in Illinois has to feed the approximately 200,000 people that the converted land previously fed. This equals the population of a city twice the size of Springfield, Illinois. This fact compounds the impact of population growth. (2) This rate of conversion is severe enough to be detrimental to Illinois agricultural exports. This damage in our balance of payments will impact our economic growth. The primary impact concerns our ability to pay for imported oil. (3) The present value of the principal crops which could be produced on the converted land is about $22 million per year. The productivity of the land in other uses would, of course, depend on the nature of the sprawl. However, real estate taxes from housing developments would come nowhere near the agricultural productivity these lands contribute to the economy.

Urbanization

For the farmer to expand under pressure of the "get-bigger-or-get-out" imperative, the purchase or leasing of additional land must be possible at rates relative to expected returns from added production. When land costs rise above the potential return from production, economics prohibits expansion.

Urbanization is one of the major reasons for the increase in land prices. Speculation in land unrelated to its agricultural value is limiting its availability for farming. According to the US General Accounting Office, one indication of this trend is the 114 percent increase in land prices between 1972 and 1978.

Other figures confirm the degree to which resource lands are being irretrievably converted or impacted by urbanization. A further analysis of the SCS national conversion figure by the National Association of Conservation Districts (NACD) concluded:

"The most permanent land use change is the shift of cropland to urban and built-up uses. About 29 million acres, most of which were either cropland or had crop production potential, were converted between 1967 and 1977 in the United States of America. In addition, about 2 million acres were converted to small water areas. The figures combined equal more than all the rural area in the State of Illinois.

"The rate of conversion to urban and built-up lands has become more rapid in the past 10 years. The 1967 data may underestimate the amount of urban land at that time, due to the fact that some areas outside incorporated cities and towns were excluded from the estimates. But the increase from an average of 1 million acres of annual conversion between 1958 and 1967 to the current average of nearly 3 million acres each year in the past decade indicates an accelerating decline of the nation's crop producing potential."

Conversion is particularly serious to the quality of farmland taken also, according to the NACD study. Historically, settlements have been located in proximity to fertile farmland, and consequently, expansion tends to take land of superior agricultural value. The more level areas with well-drained soils that make the best cropland afford the most desirable condition for industrial, residential, and commercial development. In the nation as a whole about 35 percent of the farmland converted is prime. In Illinois this figure is nearly 70 percent.

The trend is showing up in another set of statistics. The pasture-conversion-to-cropland index is higher in North America than in any other area of the world. In Illinois, where the land is very productive, this trend is surely more predominant.

According to SCS estimates, this trend, among others, has caused our state and national soil erosion to surpass the levels experienced in the dust bowl days of the 1930s. More intensive row cropping on marginal land is a direct economic impact of the conversion problem growing worse as arable land grows smaller.

Land-Use Planning

The farmland preservation movement should not be viewed as a "no-growth" effort. Farmland preservation is simply one component of a *comprehensive development plan* for a region or county. The preservation effort

Illinois Business Review (ISSN 0019-1922)

Published monthly except January and September

Bureau of Economic and Business Research
University of Illinois
428 Commerce West, Urbana, Illinois 61801

Director, ROBERT W. RESEK; *Assistant to the Director,* WILLIAM R. BRYAN; *Editor,* NELLE WAGNER; *Research Assistants,* THOMAS B. BRYAN, PHILLIP A. CARTWRIGHT, JOHN F. SCHNELL, and RUSSELL SMITH.

The material appearing in the *Illinois Business Review* is derived from various primary sources and compiled by the Bureau of Economic and Business Research. Its chief purpose is to provide businessmen of the State and other interested persons with current information on business conditions. Signed articles represent the personal views of the authors and not necessarily those of the University or the College of Commerce. The *Review* will be sent free on request. Second-class postage paid at Urbana, Illinois.

not only protects a valuable natural resource, farmland, but it also promotes the concept of a wiser and more efficient use of land which is consumed by development.

Communities and counties can no longer afford the cost involved with uncontrolled or haphazard development. Local governments have to consider the economic impact of such development on the ever escalating cost of public services. By planning for such future growth and development, local government can encourage the use of vacant land within urbanized areas. By the use of infilling, costs of urban services can be minimized, since much of the vacant land in urban areas has access to the existing urban infrastructure. Studies have proven that utilities and services cost less with this type of planning.

For years farmland has been viewed as land which should be utilized for future development. At the same time, land for industrial development was considered as a very valuable community asset to be preserved and protected from incompatible conflicting land uses. It is being viewed as an industry and as a source of wealth to local economies and worthy of protection from encroachment by incompatible land uses.

Many specific examples can be found. DeKalb County, Illinois, has had a farmland preservation program since 1972. The program centers around a growth boundary on a land-use-plan map. It is implemented through a zoning ordinance. Land outside the growth boundary is zoned exclusively for agriculture and related uses.

In order to provide data to support its preservation effort in the courts, the county contracted with Northern Illinois University to conduct two studies. *A Guidebook For Fiscal Impact Analysis of Residential Development* and *Impacts of Rural Residential Development on Adjacent Farming Operation in DeKalb County.* The guidebook study proved that "scattershot" rural subdivisions increased costs for township road commissioners and school districts (busing). The adjacent farming study indicated that farmers adjacent to subdivisions experienced operational problems such as trespassing, crop damage, drainage, and so on. These studies will be utilized by the county as basic data in support of the preservation program.

A final aspect of DeKalb County's program is the support provided by the agricultural community. DeKalb County has many confined cattle-hog operations and a long established history of family farming operations. The farmers in the county saw the potential conflict between farming and scattered rural development. To protect their investments and future farming potential, the agricultural community publicly supported the county's farmland preservation program.

Conclusion

The argument that the United States and Illinois have an agricultural land surplus is incorrect for other reasons as well. It ignores the importance of our abundant farmland to the world. Not one developing country of the world can refute at least a partial reliance on our fertility and production in the Corn Belt.

No one will be so naive as to argue that people will be starving in the United States by the year 2000. However, if the *current* rate of conversion continued (at 100,000 acres per year) — hundreds of thousands may starve due to our possible inability to provide food exports. The callousness of this argument could hardly be palatable to the most extreme isolationists.

The ludicrous position that we should allow uncontrolled conversion of our prime farmland is closely akin to the idea that we do not have an energy crisis.

By the same token, would the people of DeKalb County, and others, have initiated preservation programs for the reason that the agricultural community alone wanted it? We think not. It was a combination of urban and rural sentiment. And it is a program that is present in many forms, and areas of our state and nation. Both farm folk and urbanites will benefit from preservation.

A view we support in this issue sums up the theme of our argument very well. It is simple. Why should we pay to replace resources which we can plan to preserve?

Rejoinder by Julian L. Simon

The comment by the Division of Natural Resources (DNC) relies heavily on the technique of unproven personal accusations — that I "mislead readers . . . through manipulation of available facts," and "questionable logic," that "misinformation is . . . created" with "trends of questionable validity," "ludicrous," and so on. Does this simply indicate that they could find no better arguments?

The central facts on which DNC relies are simply wrong. For the US as a whole, they assert that the "current average" of "the rate of conversion to urban and built-up lands [is] nearly 3 million acres each year." This is the figure disseminated by the National Agricultural Lands Study (NALS), an agency of the US Department of Agriculture, and the Council on Environmental Quality (CEQ) which is orchestrating the campaign to "preserve" agricultural land. As I stated in my original article, that statistic is grossly wrong, as is well-known at the US Department of Agriculture.

H. Thomas Frey of the USDA's Economic Research Service analyzed the changes between the last two completely published Censuses of Agriculture, 1969 and 1974, and found the total shift into urban areas plus transport uses to be .9 million acres per year, a total of 4.6 million acres for the five years. Some other agricultural land went out of use, but that was because it had "low soil fertility" and a terrain unsuited to efficient use of modern machinery, according to another ERS-USDA analysis by M. L. Cotner, M. D. Skold, and O. Krause. At the same time good new cropland is being created by draining swamps and irrigating deserts, at the rate of 1.3 million acres per year. The total acreage of farmland harvested actually increased, from 286 to 326 mil-

lion acres. In brief, according to Frey, "We are in no danger of running out of farmland."

Next let us consider the case of Illinois, and the "100,000-acre Illinois Conversion Figure," which DNC makes much of, but which has no foundation in fact. Dale McLean of the Greater Wabash Regional Planning Commission gathered the facts which follow, and kindly made them available to me.

The 1978 Census of Agriculture has now been published for Illinois, though not yet for the US as a whole, so let us take it as a case example of the campaign now being actively conducted by the USDA and the CEQ through the NASL. The State Director of the USDA wrote to all county supervisors and district directors on 1 October 1979: "Irrevocable conversion to other uses is resulting in the loss of 100,000 agricultural acres every year and over two million acres since the end of World War II. . . . Secretary of Agriculture Bob Bergland recognized and responded to this urgent problem." Therefore, "It is the policy of FmHA [Farmers Home Administration] to make no loan guarantees or grants under any of its programs which could result in the loss of prime farmland."

Then in Executive Order Number 4 (22 July 1980) Governor James B. Thompson said that "the amount of Illinois land dedicated to agriculture has steadily declined at an average rate of approximately 100,000 acres per year," and he continued with wording adapted from the USDA letter. He then ordered that "It shall be the policy of the State of Illinois to protect, through the administration of its current programs and regulations, the State's prime agricultural land from irreversible conversion to uses which result in its loss as an environmental or essential food production resource."

Now the facts, as shown by the 1978 Census of Agriculture, published in June 1980: In 1978 there were 22,826,463 acres harvested, while in 1974 there were 21,517,665 acres. In other words, instead of a loss of 100,000 acres yearly, there has been a gain of 262,000 acres yearly.

Illinois surely is not an isolated example of such scaremongering about purported loss of agricultural lands, using false numbers. And this campaign can wreak great damage. In the short run it has already led to restrictive laws about land use in many states, laws that hamper economic flexibility and productivity. In the longer run, this misinformation is used to justify cessation of growth in the economy and in the population, both native and immigrant.

I have some questions to ask of DNC: (1) Is it bad if it is true, as they say, that there was a "114 percent increase in land prices between 1972 and 1978?" Inflation aside, we usually think it is a good thing if assets rise in value; (2) Who are the superior minds who will prepare and execute the "comprehensive development plan" that will lead to the "wiser and more efficient use of land" which would otherwise be "consumed" by "uncontrolled or haphazard development?" Why does the DNC think that it will make wiser social decisions than do farmers and businessmen about how to take care of, or dispose of, those persons' property? If wisdom includes, at a minimum, a thorough grasp of the facts, I see no evidence of such wisdom in the DNC. (3) What does "uncontrolled conversion of our prime farmland," an idea which DNC calls "ludicrous," have to do with an "energy crisis?" In any case, what evidence does DNC offer for the existence of a resource-caused (rather than politics-caused) energy crisis? (In a coming article in this *Review* I shall argue that indeed there is no energy crisis caused by physical shortages of oil, coal, and other energy resources.)

Two new sets of Illinois statewide personal income data from the US Department of Commerce are available: detailed components of Illinois personal income (intermediate table) 1958–79; and Illinois personal income by major source and earnings by 2-digit SIC, 1958–79. Charge is $5 for each set. The following data sets continue to be available: 1973–78 personal income data for US, Illinois, and Illinois counties; 1973–78 employment data for US, Illinois SMSAs, and Illinois counties; and 1969–77 farm income and expenditures data for US, Illinois, and Illinois counties. The charge is $20 for each set to cover reproduction and handling costs. Individual county pages are $1 each with a $5 minimum charge. To obtain the data, write to the Bureau of Economic and Business Research, University of Illinois, 428 Commerce West, Champaign, Illinois 61820.

Comparative Economic Data for Selected Illinois Cities, September 1980

	Building permits (000)		Electric power consumption (000,000 kwh)		Postal receipts (000)		Employment (000)		Estimated work force unemployed (percent)	
	Sept. 1980	% change from Sept. 1979	Sept. 1980	% change from Sept. 1979	Sept. 1980	% change from Sept. 1979	Sept. 1980	% change from Sept. 1979	Sept. 1980	Sept. 1979
ILLINOIS	$ 73,888[a]	n.a.	3,549.0[a]	+3.5	40,261[a]	-15.6	4,957.0	-1.9	8.4	5.7
NORTHERN ILLINOIS										
Chicago	$ 36,975	-59.7	1,711.0	+3.1	29,374	-18.5	3,113.2[b]	-1.3	8.1[b]	5.6[b]
Aurora	2,291	-35.9	108.7	-18.5	548	-6.8	35.7	-1.1	9.9	4.5
Elgin	436	-84.8	95.5	+6.0	546	-18.9	27.5	-1.3	9.0	5.2
Joliet	2,472	+33.3	388.8	+3.9	326	-8.4	34.1	-1.2	13.1	7.3
Kankakee	561	+30.2	80.6[c]	+6.8	256	+0.8	37.6[b]	-0.3	11.1[b]	8.5[b]
Rock Island-Moline	6,982	+6.0	124.3[d]	-0.7	1,409	+6.1	100.2[e]	-6.3	8.3[e]	4.2[e]
Rockford	4,691	-1.5	159.2	+0.1	869	-14.4	121.1[b]	-6.5	10.3[b]	5.8[b]
CENTRAL ILLINOIS										
Bloomington-Normal	1,127	-82.6	52.1	+13.0	906	-6.6	56.3[b]	-3.2	6.3[b]	2.9[b]
Champaign-Urbana	1,242	-41.6	58.4	+10.6	581	-18.9	73.4[b]	-2.2	5.5[b]	4.2[b]
Danville	872	-54.2	46.5	+4.5	206	-2.8	16.2	-7.8	15.0	10.1
Decatur	2,736	+18.0	138.5	+10.0	506	-1.4	54.6[b]	+1.8	11.2[b]	7.5[b]
Galesburg	1,592	+337.4	30.8[c]	-9.4	137	-11.0	13.2	-9.6	14.7	7.6
Peoria	3,225	-10.2	198.4	+10.3	1,488	-5.8	162.6[b]	-.20	7.7[b]	4.7[b]
Quincy	672	-38.7	44.8	+21.1	211	-16.3	17.9	-3.7	9.9	5.9
Springfield	2,745	-41.0	126.9	+8.4	1,857	-11.1	90.3[b]	+2.4	7.0[b]	5.8[b]
SOUTHERN ILLINOIS										
East St. Louis	801	+602.6	28.0	+10.2	193	+4.9	21.6	-3.6	13.9	12.7
Alton	618	+28.0	85.7	+8.8	126	-9.4	13.5	-3.7	13.0	9.7
Belleville	3,850	+470.4	32.2	+22.9	390	+0.3	17.1	-3.4	12.2	11.0
Carbondale-Murphysboro	n.a.	n.a.	38.6	+21.0	332	-7.8	11.0[f]	-4.3	6.8[f]	6.8[f]

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory. [d]Includes East Moline. [e]Data for Carbondale township. [f]Data for the City of Carbondale. n.a. not available

The Unemployment Rate Reconsidered

PHILLIP CARTWRIGHT

The unemployment rate is one of the most frequently cited indicators of the state of the economy. It is a measure of unused human resources. As the level of unemployment rises beyond some point there are increases in the economy's unused productive capacity; declines in the level of unemployment beyond some point may mean that productive capacity has neared its short-term limits.

The widely accepted use of the unemployment rate as a barometer of the health of the economic environment derives from willingness to suppose that changes in the level of unused resources are the mirror image of changes in used resources. As the unemployment rate rises, the inference is that the economy has weakened. Conversely, as the level of unused labor resources shrinks it is inferred that the economy has strengthened. Unfortunately, to shatter a metaphor, the mirror is cracked. The purpose of this article is to argue that the unemployment rate is not an accurate indicator of the economy's overall performance, and thus caution must be used in interpreting its meaning.

In order to consider the types of signals the unemployment rate is likely to send, the current measure is defined and broken into its component parts, focusing upon the types of changes underlying fluctuations in the rate. It appears that the unemployment rate tends to overstate the extent to which human resources are unused and the volatility of the nation's economic climate.

Background: The Unemployment Rate Defined

To provide a means for monitoring labor market conditions, the Bureau of the Census conducts monthly surveys of the population. Each month 65,000 residents of homes considered to be representative of the civilian noninstitutional population are interviewed. Members of the armed forces, inmates of institutions, and persons under the age of 16 are not included in the sample used to compute the unemployment rate, although separate statistics are collected and published for individuals 14 and 15 years of age.

Broadly speaking, an individual may be classified as belonging to one of two groups. Persons who are technically employed or unemployed are considered members of the civilian labor force, while all other persons, except for those mentioned previously as not being figured into the unemployment rate, are classified as not being a part of the labor force. Members of the armed forces are added to the civilian labor force to compute the total labor force.

The Bureau of Labor Statistics defines unemployed persons as all individuals 16 years of age and over, who did not work during the survey week, but who had made an effort to get a job during the previous four weeks and who were available for work during the week the survey was conducted. In addition, persons are included who did not work, who were available for work and were waiting to report to a new job within 30 days, or who had been laid off.

Employed persons are individuals who are at least 16 years old who did not work at all in their own businesses, professions, or on their own farms, or who worked at least 15 hours in a family-owned enterprise. Furthermore, a person is counted among the employed if that individual is not currently working, but has a job or business from which he or she is temporarily absent due to illness, weather, vacation, a labor-management dispute, or personal reasons, regardless of whether or not pay is received from an employer or the person is seeking another job.

The civilian labor force is the sum of those persons in the ranks of the employed and unemployed. By adding together those in the civilian labor force and those in the armed forces a figure is obtained for the number of individuals in the total labor force. All other persons are not in the labor force. This category includes all persons engaged in their own housework or in school. Anyone unable to work due to a long-term illness or retirement is classified as being outside the labor force, as are the voluntarily idle, seasonal workers for whom the survey work fell in an off season and who were not reported as being unemployed, and people working less than 15 hours per week without pay.

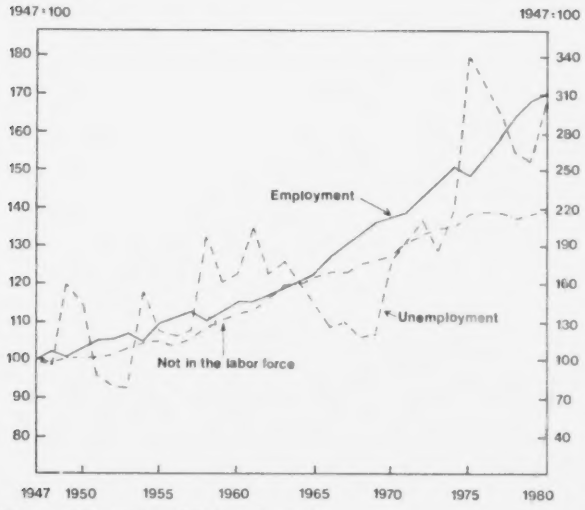
The unemployment rate is defined as the ratio of unemployment to the sum of employment and unemployment. These fractions are multiplied by 100 so that the unemployment rate can be read directly as a percentage of the total civilian labor force.

Having defined the possible classifications of individuals, a brief look at the historical behavior of these numbers is of interest. Chart 1 plots the components of the total civilian labor force for the years 1947–80. Data for 1980 have been estimated by taking a simple average of the monthly data available for the first six months of the year. It must be pointed out that some caution is required in evaluating historical data due to changes in the sampling procedure. In order to facilitate comparisons between the series, the data have been indexed with 1947 as the base year.

All three series are characterized by an upward trend over the 34-year period, although growth rates have varied widely between the components. As Chart 1 indicates, the rate of growth in employment exceeded that of the number of persons not in the labor force. Employment grew at an average annual rate of 1.3 percent over the 1947–65 period, but the growth was uneven. Reflecting the increased number of labor market participants born immediately following World War II, and the number of women who "officially" entered the labor force, employment growth turned sharply upward after the mid-1960s. From 1965 to 1980 growth averaged 2.1 percent.

Looking at the data showing the number of persons

Chart 1



Bureau of Economic and Business Research

not in the labor force, the numbers reveal substantiation of the observations already made. While it is clear that the growth rate is below that of employment, during the years 1947 to 1965 the number of individuals classified as being not in the labor force grew annually at an average rate of 1.1 percent as contrasted with a rate of 0.8 percent from 1965 to 1980.

Looking briefly at the behavior of unemployment, three observations emerge. First, the extreme volatility of the data is striking (even though the data have been scaled on Chart 1 to reduce the volatility). The data show seven peaks and eight troughs over the period observed. Second, as has been characteristic of the other data, the unemployment series exhibits an upward trend over the entire period. Each cyclical peak, except for 1953, is above the preceding one. Third, and most important, the relation between changes in unemployment and employment is far more difficult to discern than one might expect, that is, the two data series are not perfectly correlated with each other.

It is this third observation which motivated the metaphor of the mirror at the outset, and which now serves to indicate the extent to which the unemployment rate might not serve as an accurate indicator of the economy's ability to absorb persons into the ranks of the employed.

The unemployment rate is plotted as the solid line in Chart 2. Changes in either of the components, which together constitute the civilian labor force, that is, employment and unemployment, induce changes in the the unemployment rate. The behavior of the unemployment rate is dominated by the unemployment series, and hence is likely to send incomplete if not wrong messages about the current state of the economic environment.

An Alternative Measure

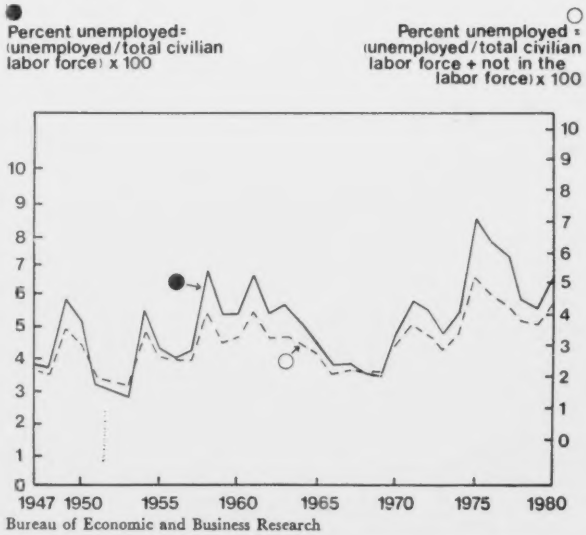
The unemployment rate is not only misleading in the sense that it obscures demographic changes in employment and the number of persons counted as not belonging to the labor force, but casual observation of the unemployment rate is likely to leave an exaggerated sense of the economy's instability. By redefining the unemployment rate, it is hoped that the resulting alternative will more effectively capture the impacts of significant demographic changes and provide a more accurate indicator of the economy's overall health.

Recall that the unemployment rate measures the proportion of the total civilian labor force that is technically unemployed. As such it is not a measure of the number of unemployed workers relative to the available labor force or working-age population. Because the unemployment rate excludes those persons who are technically not in the labor force, it cannot show what percentage of the total available stock of human capital is unemployed. This point is critical for two reasons. First, the exclusion of some persons belongir to the working-age population results in an overstatement of the rate of unemployment, and second, the volatility of the unemployment rate is increased.

Before considering these propositions, it is reasonable to ask whether the growth in the working age or noninstitutional population has been significantly different from the growth in the civilian labor force. If the behavior of the two series has been identical, the failure of the unemployment rate to include individuals not in the labor force is not as serious an issue as I have already suggested.

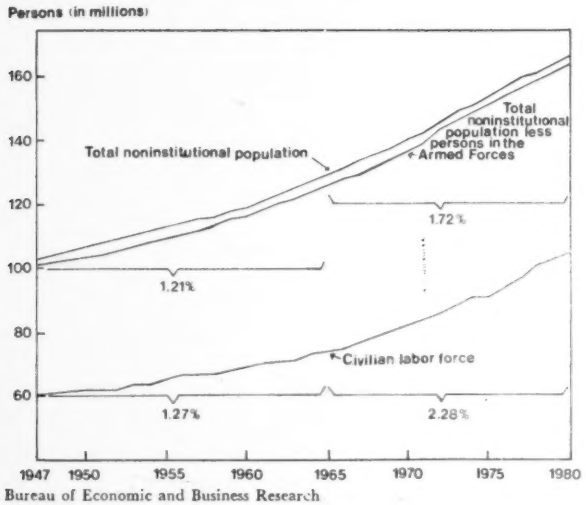
The total noninstitutional population is defined as the sum of the total labor force and persons not in the labor force. Subtracting persons in the armed forces and individuals not in the labor force gives the figure for the civilian labor force. The data for the total noninstitutional population, the noninstitutional population less military personnel, and the civilian labor force are shown

Chart 2



Bureau of Economic and Business Research

Chart 3



Bureau of Economic and Business Research

in Chart 3. Annual average rates of growth are shown for the latter two series. The growth rates were very similar through 1965. In the following years, growth in the noninstitutional labor force less military personnel has fallen well below that of the civilian labor force. This observation in part reflects demographic changes in the number of persons not in the labor force discussed earlier in the article. The two series do seem to behave differently and, therefore, by incorporating those persons not in the labor force into the unemployment rate, this new measure of unemployment will exhibit significantly different behavior.

These calculations are not intended to lead to the conclusion that changes in the number of persons serving in the armed forces have no impact on the employment rate. On the contrary, changes in the number of military personnel tend to alter the size of the civilian labor force. The resulting change in the unemployment rate will depend upon the extent to which changes occur in the levels of employment and unemployment. The analysis of population shifts between the civilian labor force and the total labor force is beyond the immediate scope of this article.

Concern was expressed over the extent to which the rate of unemployment overstates the underutilization of human resources and exaggerates the instability of the economy. The evidence already given suggests that a possible solution to these problems can be achieved by redefining the unemployment rate as the ratio of unemployment to the total noninstitutional population excluding numbers of the armed forces. This measure can also be defined as the ratio of unemployment to the sum of the total civilian labor force and those not in the labor force. This ratio is plotted as the broken line in Chart 2.

When contrasted with the most frequently cited unemployment indicator published by the BLS, two significant differences emerge from the analysis. Clearly, in terms of magnitude, the alternative ratio is smaller. However, this is to be expected, given the increase in the size of the denominator of the ratio and by itself, it can be argued, this result does not warrant a change in the definition of the unemployment rate. A much more significant feature, which can be discerned from analyzing Chart 2, is the relative decline in the volatility of the proposed indicator, and this is not simply a matter of casual observation. The difference in the variances of the two measures is significant in the statistical sense.

The leading explanation for the smaller variance of the alternative measure is that the ratio is less sensitive to transitory shifts in labor market conditions. Such variations are induced by changes in the preferences or particular circumstances of individuals, which result in movements into and out of the labor force. For example, an unemployed individual may become discouraged over tight labor market conditions and drop out of the labor force "voluntarily." Hence, the suggested measure of the unemployment rate may be an improvement over the traditional measure. It not only provides a more accurate measure of the unemployment of human resources relative to the potential work force, but its lower variance suggests that the economic environment is not as unstable as the accepted measure might indicate.

Some Concluding Remarks

The issues raised in this article have received a considerable amount of attention from both private and government agencies. Although the typically cited measure of the unemployment rate is not likely to be changed in the near future, no doubt this line of research will continue. The underlying message of this article reaches beyond the behavior of a few statistics, namely, when evaluating the economy's performance we must be careful not to permit narrowly defined measures of economic activity to distort the view of reality. It is not always a simple matter to realize when one is looking into a cracked mirror.

Illinois Coal

Energy is no less crucial a national issue as we approach 1981 than it was seven years ago during the 1973 oil embargo. Prices of all energy sources have skyrocketed over this period, and we are more conscious of how much of it we use. Conservation is no longer something we should do, but don't. We are conserving. We are insulating our homes; turning down our thermostats; buying smaller, more fuel efficient cars; and making greater use of public transportation. The need to conserve is unmistakably clear. But we still must become less reliant on oil by being able to substitute other fuel sources for at least some of its uses. America's abundant coal reserves, a sizable portion of which are in Illinois, may provide a source of this substitute.

We are trying to get back to where we were in the early part of this century when this country burned mostly coal, not oil. Although consumption patterns have changed — we certainly did not drive as many cars in those days — our bountiful coal reserves could be used to supply an even greater proportion of our electricity needs than they do already. How will the Illinois coal industry fit into this picture? The answer seems to center around the degree to which society is willing to sacrifice strict environmental control for expanded coal consumption.

The US has undergone two transitions in basic energy input use. In 1850, 90 percent of America's energy inputs came from wood, but by 1910 the country had switched to using coal for 75 percent of its energy needs. In the 1940s oil and natural gas began to replace coal, which today supplies less than a quarter of this country's energy inputs. We are attempting a third transition: from oil and natural gas back to coal.

US coal reserves constitute one-fifth of the world's reserves, and on the basis of energy content are three times as great as the estimated 600 billion barrels of oil in the Middle East. Based on the present consumption rate, America's coal reserves could last for 700 years. For many of oil's uses, however, coal is not a viable substitute. But coal can substitute for oil and natural gas in the production of electricity, although it is not without its drawbacks. Electricity generation accounts for 73 percent of coal production, but coal represents only half of the fossil fuels consumed by this process. Most of the Illinois coal produced is used to generate electricity.

The Illinois Basin (Illinois, Western Kentucky, and Indiana) is richly endowed with some 230 billion tons of coal. The "in-the-ground" reserve base — coal which is considered minable under current technological and economic constraints — is estimated to be about 129 billion tons. Most of these reserves are in Illinois. Even taking into account mining losses of 50 percent for underground mining, or 15 percent for surface mining, and adding another 10 percent loss in preparation plants, the Illinois Basin's "recoverable" reserves are still about 62 billion tons. The major problem in the use of this fuel source is that these reserves have a high sulfur content.

Production and Employment Trends

Stagnation in Illinois coal production, exemplified by the closing of five mines so far this year, is a recent phenomenon. The table shows the trends in Illinois coal production and employment. The switch from wood to coal as the nation's primary energy source in the early part of the 20th century was reflected in the rapid growth in production between the periods 1895–99 and 1900–04, and then again between 1910–14 and 1915–24. In 1918 almost 90 million tons were produced by 365 mines, employing 91,000 workers. Following the negative growth of the depression years, Illinois coal rebounded to meet the war years' demand. The year 1944 saw Illinois coal production reach over 77 million tons. The subsequent period of decline, in which cheap oil, primarily imported oil, began to replace coal, resulted in Illinois coal output reaching a trough of approximately 46 million tons in the late 1950s, more in line

Production and Employment Trends in Illinois Coal: Five-Year Averages for 1890-1969, Yearly Statistics for 1970-79.

Year	Tons mined	Number of mines operated[a]	Number of employees
1890-94	16,644,895	n.a.	33,805
1895-99	19,925,798	n.a.	36,275
1900-04	30,768,766	n.a.	46,824
1905-09	44,347,142	n.a.	66,360
1910-14	55,791,836	n.a.	78,197
1915-19	73,067,594	n.a.	82,938
1920-24	73,028,434[b]	365	96,873[b]
1925-29	58,525,445[b]	229	70,102[b]
1930-34	42,670,542	169	51,616
1935-39	48,187,248	164	45,830
1940-44	64,745,704	144	35,304
1945-49	63,867,286	159	32,126
1950-54	49,129,284	116	23,965
1955-59	45,870,046	87	12,325
1960-64	48,556,796	69	9,244
1965-69	62,647,118	56	9,144
1970	64,884,103	64	10,214
1971	58,415,239	63	10,571
1972	65,521,394	59	11,237
1973	61,548,670	56	11,409
1974	58,072,640	55	12,467
1975	54,539,019	57	13,646
1976	58,136,144	62	14,731
1977	53,880,434	70	16,114
1978	48,744,149	71	17,861
1979	59,538,127	71	18,499

Source: State of Illinois, Department of Mines and Minerals, *1979 Annual Coal, Oil and Gas Report*.

[a]These statistics from 1969 to present are not comparable with those for prior years, as they include local mines which were not reported previously.

[b]1925 is omitted from the calculation of these average statistics for this period because of a different reporting period.

with the early 1900s and Great Depression levels than any other period. Sustained but moderate growth followed through the next decade, resulting from the increased steam coal demand of electric utilities. The continuing rise in utility demand nationwide through most of the 1970s, when as a percentage of total consumption utilities' share rose from 56 percent in 1969 to almost 74 percent in 1978, was met by an 18 percent increase in national production. Illinois coal production stagnated during this period. The Illinois Basin supplies about 18 percent of the nation's coal output today; in 1972 the figure was 25 percent. The decline in the demand for Illinois coal can be attributed to the conflict between its high sulfur content and clean air regulations, coupled with the rapid growth of coal mining in the western states.

The influence of western coal mining on the Illinois coal industry is important for two reasons. First, there are productivity differences between the two areas. Since the passage of the 1969 Coal Mine Health and Safety Act, the productivity of America's coal mines has been declining generally. Productivity in the underground mines of Illinois declined by approximately 44 percent between 1969 and 1977. Production from these mines accounted for better than half of Illinois's total output. The decline in the state's surface mine productivity was somewhat more severe. The productivity of western surface mines, however, dropped only 6 percent. Western coal mining is predominantly the surface mining of coal fields which are new relative to those in Illinois. As such, western mining is likely to remain much more productive than Illinois mining with its high proportion of underground production and aging surface fields. The second factor in the relationship between Illinois and western coal is the latter's low sulfur content, especially relative to that of Illinois coal.

Illinois Coal and Environmental Pollution

Illinois coal is "dirty." Indeed, this is probably the biggest roadblock to the expansion of coal production in the state. If society wishes to minimize air pollution, then it needs to minimize emissions of sulfur dioxide. This requires either the burning of coal with a low sulfur content or the installation of expensive "scrubbers" — antipollution devices attached to the smokestacks of coal boilers to remove sulfur dioxide gas — by electricity-generating plants to clean coal with a high sulfur content. In order to meet emission standards without the use of scrubbing equipment, coal with a sulfur content of less than 1 percent is required. Less than one half of 1 percent of the coal in Illinois's reserve base is of this quality. Moreover, almost 88 percent of the reserve base contains more than 3 percent sulfur. Clearly, the only market for Illinois coal under current pollution standards is one which must include the cost of pollution abatement equipment.

However, an estimated 19 million tons of Illinois Basin coal burned in 1977 were not in compliance with air pollution regulations. The Clean Air Act of 1970 required all coal-burning power plants to meet specific regulations established under the State Implementation Plan (SIP). Since many plants were not able to meet these standards, temporary "variances" in the requirements were allowed. While some plants continue to operate under these variance plans, others have been forced to purchase low-sulfur coal. A switch to low-sulfur coal suppliers — which means away from Illinois coal — by electric utilities could continue.

Under the 1977 amendment to the Clean Air Act, each state is required to submit a revised SIP. All existing power plants must be in compliance with these standards by December 1982. An additional regulation — the federal New Source Performance Standards (NSPS) — released in June 1979 mandated the removal of 70 to 90 percent of the sulfur content of coal burned in plants which began construction after 18 September 1978. It also allowed for credits to utilities for scrubbing, in the order of 5 percent for 35 percent sulfur removal. Furthermore, the NSPS would require the installation of scrubbers on all units, regardless of the sulfur content of the coal used, suggesting that the relative disadvantage of Illinois coal might be eliminated. The net effect of these regulations on the viability of Illinois coal is yet unclear. Compliance goals could very well be relaxed and the regulations themselves could very well be modified in the growing "antiregulation" climate.

In the past few years, however, Illinois Basin coal has been able to remain competitive on a delivered price basis. Increasing production costs in eastern mines and rising freight rates for western coal — especially on a per energy unit basis — transported to the midwestern and south central states may allow Illinois's position as a coal producer to remain reasonably stable. The fate of Illinois coal still seems to revolve around the environment-energy tradeoff.

The Outlook

Prevailing economic conditions suggest that major disruptions in production and employment caused by massive shifts by utilities to low-sulfur western coal will not be forthcoming. A continuation of "variance" permits and a relaxation of pollution standards is not an unlikely scenario for the first half of the 1980s under the Reagan Administration's presumably different energy policy. Even at this very early date, one is still inclined to predict that under the new administration energy production will be weighted more heavily than environmental protection. If this turns out to be true, Illinois's high-sulfur coal, also valued high in energy content, and able to be transported relatively cheaply to traditional markets, may resume its historical position as a major supplier of America's energy needs.

JOHN F. SCHNELL

Illinois Business Indexes

Item	Sept. 1980	Aug. 1980	July 1980	June 1980	Sept. 1979
Leading indicator (1969=100)	85.7	83.4	81.0	79.6	93.9
Coincident indicator (1969=100)	123.6	122.7	122.6	122.0	153.0
Employment-manufacturing (in thousands)	1,181.9	1,183.4	1,178.9	1,207.2	1,285.6
Average weekly hours-manufacturing	39.9	39.3	38.4	39.3	41.5
Weekly earnings-manufacturing	$328.38	$320.30	$314.01	$311.36	$309.05
Layoff rate-Chicago	n.a.	1.0	1.4	1.0	0.4
Help wanted advertising-Chicago (1967=100)[1]	71.0	68.0	68.0	69.0	111.0
Help wanted advertising-St. Louis (1967=100)[1]	59.0	54.0	52.0	56.0	80.0
Ordinary life insurance sales (in millions)	$1,519	$1,406	$1,581	$1,648	$1,847
Retail sales (in millions)	n.a.	$3,901	$3,788	$3,806	$4,027
Coal production (in thousands of tons)	5,372	5,278	4,070	5,246	4,595
Petroleum production (in thousands of barrels)	1,795	1,855	1,843	1,799	1,781
Vendor performance (percent)	39.0	33.0	30.8	25.9	49.0
Building permits (in thousands)					
Residential housing units	3.35	2.63	2.85	1.79	4.12
Value of residential housing	$130,291	$111,936	$107,752	$71,987	$137,410
Value of nonresidential housing					
Industrial buildings	$25,582	$19,868	$20,400	$28,095	$48,620
Office, banks, and professional buildings	$30,354	$19,332	$38,029	$31,.06	$41,380
Stores and other mercantile buildings	$17,863	$13,496	$21,281	$32,632	$39,003
Other	$34,720	$34,455	$30,708	$41,004	$46,029
Consumer price index					
North Central US	-	134.9	-	129.1	-
North Central/population more than 4,000,000	-	136.8	-	130.7	-
North Central/population 385,000 to 1,250,000	-	134.7	-	134.4	-
North Central/population 75,000 to 385,000	-	132.9	-	131.9	-
North Central/population less than 75,000	-	131.7	-	128.7	-
Chicago	250.1	249.2	248.8	249.7	225.1
St. Louis	232.-	-	244.0	-	225.2
Prices received by farmers	133	130	121	116	116

	1980:II	1980:I	1979:IV	1979:III	1979:II
PERSONAL INCOME IN ILLINOIS[2] (in millions of dollars)					
PERSONAL INCOME by place of residence	$118,161	$116,226	$112,317	$112,096	$110,013
TOTAL LABOR AND PROPRIETORS' INCOME					
by place of work					
by type					
Wage and salary disbursements	$ 74,534	$ 73,678	$ 70,954	$ 72,266	$ 70,904
Other labor income	7,076	7,672	7,287	7,376	7,137
Proprietors' income	4,708	7,298	7,603	7,294	6,951
Farm	1,401	1,695	2,026	1,878	1,808
Nonfarm	5,397	5,603	5,577	5,416	5,143
by industry					
Farm	1,826	2,110	2,419	2,259	2,166
Nonfarm	87,482	86,339	83,424	84,678	82,827
Private	76,137	75,416	72,527	73,653	72,253
Ag. serv., for., fish., and other	204	198	201	198	191
Mining	902	885	885	900	879
Construction	5,106	4,944	4,920	4,970	4,824
Manufacturing	25,481	25,602	24,271	25,741	25,526
Nondurable goods	7,685	7,578	7,740	8,055	7,921
Durable goods	17,796	18,024	16,531	17,686	17,605
Transportation and public utilities	7,175	7,180	7,058	7,028	6,779
Wholesale trade	7,484	7,292	7,086	7,188	6,966
Retail trade	8,432	8,520	8,133	7,941	7,752
Finance, insurance, and real estate	5,992	5,786	5,592	5,521	5,422
Services	15,361	15,000	14,383	14,167	13,910
Government and government enterprises	11,345	11,122	10,897	11,025	11,574
Federal, civilian	2,134	2,031	2,004	1,942	1,917
Federal, military	581	577	556	517	521
State and local	8,630	8,514	8,338	8,566	8,137
INCOME BY PLACE OF WORK					
Wage and salary disbursements	74,534	73,678	70,954	72,266	70,904
Farm	384	376	357	366	326
Ag. serv., for., fish., and other	128	123	126	124	120
Mining	692	683	686	702	687
Construction	4,314	4,093	4,026	4,058	3,946
Manufacturing	21,886	22,074	20,956	22,280	22,155
Nondurable goods	6,642	6,574	6,726	7,021	6,927
Durable goods	15,244	15,500	14,231	15,259	15,228
Transportation and public utilities	6,035	6,066	5,978	5,968	5,762
Wholesale trade	6,514	6,337	6,160	6,280	6,104
Retail trade	7,090	7,132	6,795	6,651	6,541
Finance, insurance, and real estate	4,743	4,574	4,384	4,323	4,276
Services	11,753	11,431	10,913	10,833	10,718
Government and government enterprise	10,993	10,789	10,574	10,702	10,269
Federal, civilian	2,042	1,946	1,921	1,862	1,838
Federal, military	581	577	556	517	521
State and local	8,371	8,266	8,097	8,322	7,911

[1]Source: The Conference Board, *Help Wanted Advertising*, September 1980. [2]Bureau of Economic Analysis, *Major Sources of Personal Income in Illinois*, October 1980. n.a. not available.

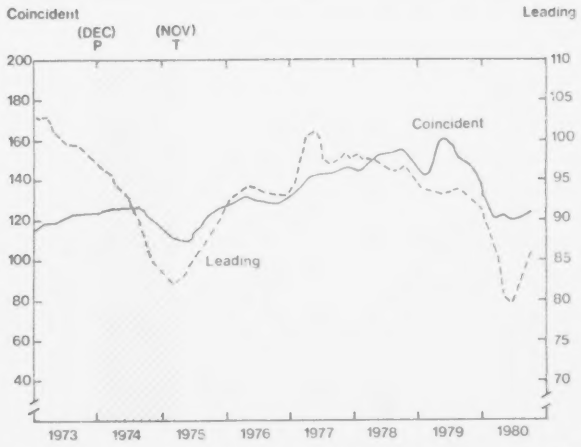
Second-class postage paid at Urbana, Illinois

D

Economic and Business Research
428 Commerce West
Urbana, Illinois 61801

MS JEANNE LONG
CONGRESSIONAL INFO SERVICE
7101 WISCONSIN AVE
WASHINGTON, DC 20014

Illinois Economic Indicators



Note: *P* and *T* designate peaks and troughs of the business cycle for the US as defined by the National Bureau of Economic Research.
Bureau of Economic and Business Research

Previous signs that the Illinois economy has regained some of its strength are confirmed by the September indexes of coincident and leading economic indicators. The index of coincident economic activity climbed nearly 0.5 percent during the most recent month. Real weekly earnings in the manufacturing sector rose by 0.3 percent after recording a sharp 2.7 percent jump in August.

The leading indicator surged forward in September posting a 2.8 percent rise over the August figure. The current upturn was heavily supported by a renewal of activity in residential construction activity. Furthermore, the layoff rate in manufacturing declined 0.3 percent in August; following a similar decline during the previous month.

U 6910-1 U

Illinois Business Review

February 1981
Vol. 38 No. 1

Business and Economic Research | Commerce and Business Administration | University of Illinois

1981—New Beginnings with Old Problems

The concerns facing the economy in the early months of 1981 are the ones that have been in evidence since the early years of the preceding decade. We are concerned with rapid inflation, high and volatile interest rates, excessive unemployment, and an otherwise lackluster economy.

Last year's economic forecast in the *Illinois Business Review* was preoccupied with the prospective impact of a newly announced monetary policy. My view was that a stable and moderate growth in the money supply would contribute to a reduced rate of inflation. Alas, as 1980 came and went, that new policy turned out to resemble the proverbial "bladeless knife without a handle." Monetary actions during the year were neither moderate nor consistent.

Lagging Output Growth

The economy's output of real goods and services has changed little since the end of 1978. Real gross national product has not deviated more than 2 percent (plus or minus) from the pace reached in the fourth quarter of 1978. Thus, while there has been a great deal of speculation regarding recession and recovery, the plain fact is that not much has happened.

Table 1. Shortfall in Real GNP
(in billions of 1972 dollars)

Year	Actual Output	Potential output*	Gap
1973	1,235.0	1,235.0	0
1974	1,217.8	1,277.0	- 59.2
1975	1,202.3	1,320.4	-118.1
1976	1,271.0	1,365.3	- 94.3
1977	1,332.7	1,411.7	- 79.0
1978	1,399.2	1,459.7	- 60.5
1979	1,431.6**	1,509.4**	- 77.8**
1980	1,421.7**	1,554.2**	-132.5**

*Estimated by increasing 1973 output by 3.4 percent in successive years.
**Average of first three quarters.

But therein lies the story of the past several years. The recovery from the 1973–75 recession aborted well before the economy had regained its longer-term growth path. For illustrative purposes we may assume that 1973 was a year during which the economy was "on" its longer-term growth path. During that year the economy experienced an unemployment rate of just under 5 percent. Over the past two decades (1959–79) real GNP has expanded at an average annual rate of 3.4 percent. Suppose we regard that rate as the growth in potential output. These assumptions are embodied in Table 1.

Note the movements in the gap between potential and actual real gross national product. The shortfall increased sharply from 1973 to 1975; then it declined from 1975 (the trough year of the 1973–75 recession) to 1978. That is, in the first three years of recovery the economy moved briskly toward its growth path. But in 1979 and 1980, the economy's performance began drifting away from its potential.

The poor performance of the economy — so evident in terms of changes in broad gauges of the economy, such as GNP — can also be seen in specific elements of activity. For example, automobile production in 1980 was the lowest in nearly two decades. The US is no longer the dominant world producer. At 6.3 million autos, production in US factories was down 25 percent from the preceding year. Not since 1961, when auto production fell to 5.5 million units, has the domestic automobile industry fared so badly. Indeed, some analysts have characterized the 1980 recession as strictly an automobile downturn.

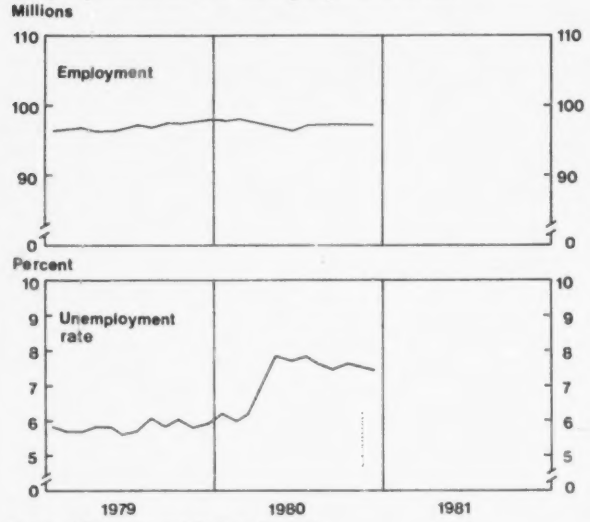
The 1980 downturn in housing was also extreme. Housing starts were down about one-third from the preceding year, and were more than 40 percent lower than in 1978. For the year as a whole, housing starts may average about 1.3 million units — roughly the same as during the 1973–75 recession.

Steel production was adversely affected by weakness in automobiles and construction. At midyear the steel industry was operating at about 50 percent of capacity. Such an operating rate is reminiscent of the Great Depression of the 1930s. By the fall, operating rates had

Transportation Fuels Inflation *By Folke Dovring* / *Page 8*

MAR 18 1981

Employment and Unemployment Rate



Bureau of Economic and Business Research

risen to just over 80 percent. Even so, steel officials assert that production remains unprofitable at such low levels of capacity usage.

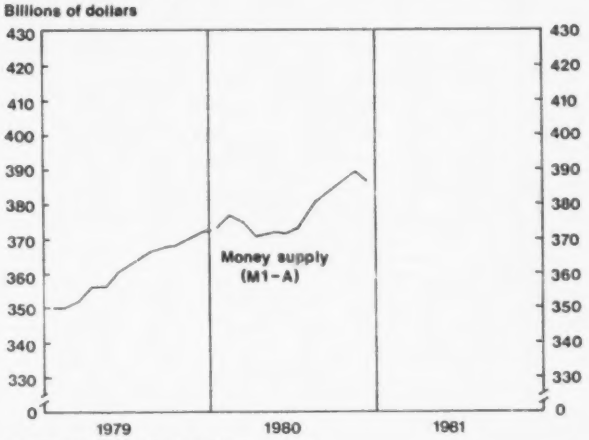
Idle industrial capacity has been accompanied by idle labor resources. Employment rose nearly 2 percent last year. Reflecting the weakened labor markets, unemployment jumped sharply in 1980. The employment rate at the end of 1979 was just below 6 percent of the labor force; by mid-November of last year unemployment had risen to 7.5 percent.

Inflation, Interest Rates, and Monetary Policy

1980 was marked by a return to double-digit inflation and to unprecedented interest rate behavior. These are not unrelated events. They are related by three sets of factors: the first consideration relates simply to measurement. Interest costs are included in our measures of inflation. Hence interest rate increases cause price indexes to rise. A second consideration relates to the commonsense view that interest expenditures are a cost of doing business. To the extent that inflation results from cost-push factors, rising interest rates serve to accelerate inflation. Finally, reversing causation, expectations regarding prospective inflation are thought to affect the level of interest rates.

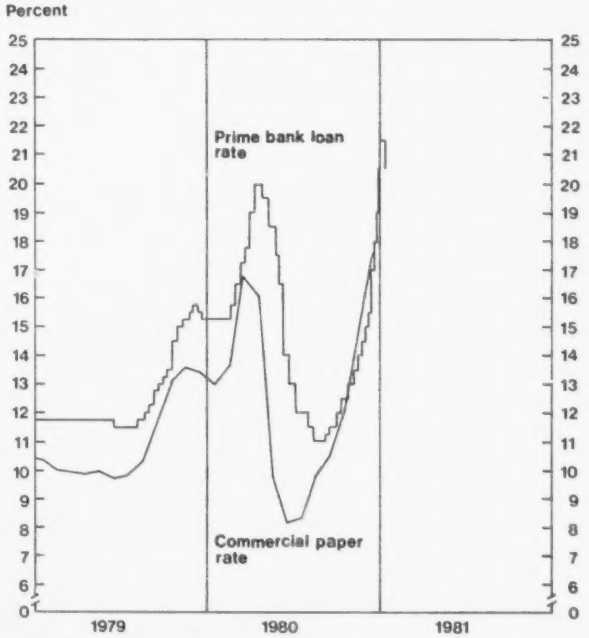
Interest rates peaked twice in 1980. As the year began it appeared that rates were edging away from highs reached in the late fall of 1979. The prime rate, the rate of interest charged by banks to major corporate borrowers, had reached 15.75 percent in November — following the Federal Reserve announcement of a change in this operating procedure. In October 1979, Paul Volcker,

Money Supply



Bureau of Economic and Business Research

Selected Interest Rates



Bureau of Economic and Business Research

Illinois Business Review (ISSN 0019-1922)

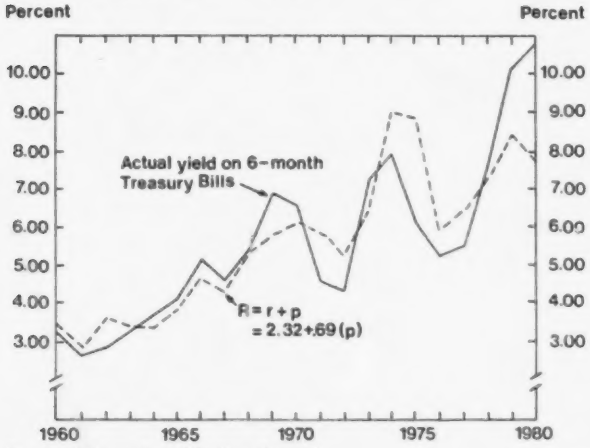
Published monthly except January and September

Bureau of Economic and Business Research
University of Illinois, 1206 S. Sixth Street
428 Commerce West, Champaign, Illinois 61820

Director, Robert W. Resek; *Assistant to the Director,* William R. Bryan; *Editor,* Nelle Wagner; *Research Assistants,* Thomas B. Bryan, Phillip A. Cartwright, John F. Schnell, and Russell Smith.

The material appearing in the *Illinois Business Review* is derived from various primary sources and compiled by the Bureau of Economic and Business Research. Its chief purpose is to provide businessmen of the State and other interested persons with current information on business conditions. Signed articles represent the personal views of the authors and not necessarily those of the University or the College of Commerce. The *Review* will be sent free on request. Second-class postage paid at Urbana, Illinois.

Inflation and Interest Rates



Bureau of Economic and Business Research
Note: 1980 based on data for 10 months. $R^2 = .72$.

chairman of the Board of Governors of the Federal Reserve System, announced that the Fed would gear its operations toward control of money — not interest rates. But by early December rates had softened. In two steps the prime rate moved to 15.25 percent, then stabilized.

In the early spring, interest rates again surged upward. The prime rates reached 20 percent in mid-April. Like a roller coaster, rates fell sharply, with the prime rate bottoming out at 11 percent in August. Interest rates then exploded, and by mid-December the prime rate reached 21.5 percent.

As already suggested, interest rate levels are importantly affected by expectations regarding inflation. There is a view that, in the long run, lenders must receive real and positive compensation for placing their funds with borrowers. Briefly put, it is argued that the interest rate (R) consists of a real rate (r) plus an inflation premium (p). That is, $R = r + p$. In the accompanying chart, an actual interest rate for the 1960–80 period is plotted along with a hypothetical rate based on considerations just outlined. The interest rate plotted is the yield when auctioned for the 6-month Treasury bill; inflation is measured by the year-to-year percentage change in the GNP deflator.

The hypothetical interest rate — predicted on the basis of the rate of inflation — moves in the wrong direction in only four instances. In particular, note that, based on actual inflation, the predicted interest rate declined in 1980 (see chart). But actual rates rose sharply higher than in 1979. The hypothetical prediction is based on *actual* inflation, which appears to have moderated in 1980. The inflation premium (p) is an *expected* rate of inflation. It can be plausibly argued that inflationary expectations in 1980 were not lower than those in the preceding year.

There are those who insist that recent interest rate increases and decreases reflect tightening and easing of monetary policy. But money supply increases tend to be most rapid during periods when interest rates are rising. This was the case last year. It was also the case during the 1960–80 period as a whole. That is, money supply growth tends to be positively correlated with interest rates; it also tends to be positively related to inflation.

As Table 2 indicates, there is a .58 correlation between year-to-year percentage changes in the money supply (a correlation of 1.00 is perfect) and the level of interest rates. The correlation between this year's changes is the money supply and inflation is .60; the correlation between last year's changes in money and this year's inflation is .78.

Some analysts insist that the relevant money supply for gauging monetary policy is "real" money. They argue that interest rate increases are caused by declines in, or inadequate growth of, the money supply adjusted for changes in the price level. As the table indicates, the correlation between real money and interest rates is −.68.

It is interesting to note that there is essentially no relation between this year's changes in the money supply and changes in real money. This is especially strange in that the money supply is positively related to inflation and real money is negatively related. It turns out that there is a correlation of −.42 between last year's change in money and this year's change in real money. For the monetary authority to exercise effective control over real money balances, it is necessary that the inflation rate be negligible.

The Outlook

I have seldom felt more helpless in formulating a sensible forecast. At this writing, the rate of inflation continues well in excess of a double-digit pace, interest rates have begun to tumble from their record high levels, and the economy has staggered through another quarter of expansion. The world within which the US economy operates is in turmoil. The Russians are still in Afghanistan, and are poised around Poland's borders. The new Reagan Administration has just taken office.

Domestic economic developments hinge especially heavily upon noneconomic, or political factors. It is not yet clear whether the new administration will be different from the preceding one. We have heard the campaign rhetoric. It remains to be seen whether the slogans can be converted into new policies. Beyond that, it remains to be seen whether the new policies — if put in place — will work.

WILLIAM R. BRYAN

Table 2. Interest Rates, Inflation, and Money

	Interest rates	Year-to-year percent change		
		Inflation	Money	Real money
Interest rates	1.00	.85	.58	-.68
Inflation		1.00	.60	-.71
Money			1.00	.08
Real money				1.00

Data: Interest rates are yields on 6-month Treasury bills. Inflation is measured by the GNP deflator. Money is the M1B series. Real money is M1B divided by the deflator.

Government Regulation—How Are Commercial Banks Responding?

MICHAEL D. CAREY

Much has been made of the adverse effects of federal regulation of the private sector. Over the past five years the leaders of both major political parties have engaged in substantial rhetoric concerning the loss of productivity which seems to accompany inordinate government intervention. The warnings of Murray Wiedenbaum, Arthur Laffer, Milton Friedman, and much of the vigorous neoconservative wave have received a broad and sympathetic audience in both public and private sectors. In fact, there is significant public support for noninterventionist policies in many areas of our national life. However, when one investigates the present state of compliance with federal regulations in the banking industry, it is apparent that all of the deregulatory and noninterventionist rhetoric has done little to assuage the day-to-day burden that these requirements impose upon banks.

In their role as financial intermediaries, commercial banks inhabit a pressure-sensitive spot which is very attractive to governmental policymakers. In the past this pressure has primarily emanated from the Federal Reserve's role in determining monetary policy. However, in the last decade many laws and regulatory requirements of a social as well as of an economic nature have been thrust upon the industry. These "social policy" requirements can be assigned to two basic categories: (1) civil rights, and (2) consumer protection. Most of the consumer protection requirements deal with disclosure of terms and conditions and are the legacy of the consumer movement, whereas the civil rights requirements are outgrowths of the minority and women's rights movements of the 1960s and 1970s. And, although these societal movements have touched all industries, their collective effect upon banking has been dramatic.

This article presents a more detailed look at the actual day-to-day effects of regulatory requirements imposed upon the commercial banking industry by federal consumer and civil rights legislation. The total economic impact of these requirements is greater in a unit banking state such as Illinois which has more than 1,200 separate banks within its borders.

The Regulatory Structure

A major problem for the banks, which also affects our comprehension of the regulatory process, is that several federal agencies are deeply involved. In general, the Federal Reserve Board is the rule-making agency. It is charged with the responsibility for promulgating regulations which will carry out the intent of congressional legislation. One would then suppose that the Fed would also be involved in examining all banks to ensure compliance with the applicable requirements. However, this is the case only with respect to state member banks (state-chartered banks which are members of the Federal Reserve System). All other banks are examined by either the Federal Deposit Insurance Corporation (state nonmember) or the Office of the Comptroller of the Currency (national banks).

It is common knowledge within both the industry and the agencies that differing standards and measurements of compliance are imposed by the various agencies. A practice which is cited as a violation by one agency may be completely overlooked by another. Also the somewhat mechanical steps which a bank must take to demonstrate compliance differ among agencies.

These differing agency approaches extend even to the type of individual chosen to perform the "consumer examination" of a bank. The Office of the Comptroller of the Currency generally uses young, idealistic recruits who are personally committed to the redress of consumer grievances, while the FDIC rotates older "commercial" examiners into the consumer area for brief periods. These commercial examiners are dedicated to the verification of the bank's financial safety and soundness and generally display little commitment to the consumer and civil rights compliance posture of the bank.

Thus, the very structure which imposes the regulations presently results in unfair and unequal enforcement of these requirements.

The Major Regulations

The regulations addressesd in this article fall into the categories of civil rights and consumer protection. Listed below are the major laws and regulations in these categories:

Civil Rights

Fair Housing Act — This is Title VIII of the Civil Rights Act of 1968 and is considered the "grandfather" of the later requirements. Generally, FHA makes it unlawful for any *lender* to discriminate in its housing-related lending activities against any person because of race, religion, national origin, or sex. The act was broadly written by Congress, and a wide variety of lending practices have been determined to be illegal under interpretation by the courts.

Equal Credit Opportunity Act — This act, implemented by Regulation B of the FRB, prohibits discrimination with respect to any credit transaction on the basis of race, color, religion, national origin, sex, marital status, age, receipt of income from public assistance-programs, and good faith exercise of any rights under the Consumer Credit Protection Act. It is particularly difficult because it both prohibits and requires a vast array of specific acts and practices associated with any credit transaction.

Home Mortgage Disclosure Act — This act is implemented by FRB Regulation C and requires that banks

Michael D. Carey is Director of the Regulatory Compliance Program, Educational Development Division of the Bank Administration Institute, Park Ridge, Illinois.

compile various housing loan data files and make such information available to depositors, public officials, and citizens in general to enable them to make informed decisions about the degree to which institutions are meeting the community's need for housing funds.

Community Reinvestment Act — This act is part of the Housing and Community Development Act of 1977 and is implemented by FRB Regulation BB. It attempts to go beyond HMDA to assess the degree to which a lending institution is meeting all of the credit needs of its community.

Consumer Protection

Truth-in-Lending Act — This act is part of the Consumer Credit Protection Act and is implemented by FRB Regulation Z. Its purpose is to require creditors to fully disclose credit terms so that consumers of credit can make informed decisions regarding relative costs of credit from various lending institutions.

Other consumer protection requirements of less individual significance (but of substantial cumulative effect) include the Consumer Leasing Act; Fair Credit Billing Act; Real Estate Settlement Procedures Act; Fair Credit Reporting Act; Fair Debt Collection Practices Act; Flood Disaster Protection Act; Electronic Fund Transfer Act.

The Sad History of Truth-in-Lending — The Truth-in-Lending Act, implemented by Regulation Z, provides graphic illustration of the confusion, complexity, and inefficiencies which result from well-intentioned but poorly structured consumer requirements. It is one of the many "disclosure" requirements which appear to be quite simple on the surface, but contain pitfalls when applied to a large and diverse industry.

The simple intent of T-I-L was to provide credit shoppers with the means by which to compare the cost of credit among lenders. By prohibiting the public use of "add-on" or "discount" methods of interest disclosure, the Congress hoped to provide a simple "annual percentage rate" or APR for consumers to compare. But, over the more than a decade that T-I-L has been in effect, the public has yet to benefit fully from the disclosure of APR. The reason for this lies in the numerous variables which can legally be used, or not used, in the actual calculation. One of these variables deals with how the bank counts the days to the first payment. Several methods are available, including the actual days method, the 30-day month method, the date-to-date method, counting forward — and the date-to-date method — counting backward. It is possible for each of these methods to arrive at a different count of the number of days to the first payment and therefore significantly alter APR. Other variables include use of differing computational methods, rounding or not rounding at various steps, and use of the minor irregularities rule.

The total effect of these options for APR calculations casts grave doubt on the ability of credit shoppers to make a true "apples-to-apples" cost comparison. In fact, a former Fed staffer recently calculated 12 different legally correct APRs for the same loan. The differing APRs ranged from the selective application of the various computational options already mentioned. Thus, although consumers are aware of APR disclosures and often make use of them when shopping for credit, the "apples-to-oranges" nature of APR calculation makes their usefulness often less than expected.

Emergence of the Compliance Function

The combined impact of required compliance with Truth-in-Lending and the Equal Credit Opportunity Act brought much confusion to our nation's banks by the mid-1970s. It was then that banks began to identify the need for a separate compliance responsibility center. In fact, the Office of the Comptroller of the Currency hastened this development with its recommendation that each national bank appoint a "compliance officer" to communicate with its examination staff. Over the following half-decade most banks have made such an appointment and are at least marginally equipped to respond to these requirements. However, this shift in the organizational structure is simply an outward manifestation of a more damaging general change in direction. The less obvious shift involves a partial abandonment of an entrepreneurial corporate posture in favor of defensive reactions to legislative and regulatory dictates. When caught in a web of complex and seemingly contradictory requirements, a typical response is one of corporate semiparalysis. As the bank begins to focus more seriously on regulatory compliance matters, the thrust of its raison d'etre begins to diminish and it finds itself immobilized in the same manner as the centipede who could no longer walk when he had to think of which foot to put in front of the other.

In order to alleviate some of the paralysis, many banks have reorganized their management structures to incorporate regulatory concerns into the planning, policies, and procedures of each function or division. Most have formally appointed a compliance officer or committee to ensure that the bank can, at the least, demonstrate intent to comply with the myriad requirements.

The responsibilities of the compliance function are broad and cut across divisional lines of authority. Three major areas of accountability are easily identified: (1) development, implementation, and administration of the bank's compliance program, (2) establishment and maintenance of policies, procedures, and controls for compliance, and (3) informing bank personnel and the board of directors of their responsibilities under the requirements.

Thus, in response to external forces, banks have undergone significant and rapid internal change during the past decade. The short-run effects of these changes have ranged from mild confusion to a sense of hopelessness at the apparent inability to direct sufficient resources to ensure overall compliance. In the long run, these changes will not only continue to dampen entrepreneurial spirit but will also result in higher explicit prices to bank customers as the additional cost of compliance management is passed on through the affected service.

These additional costs include those associated with the frequent revision of many bank forms as well as

data-processing systems changes designed to allow compliance with rapidly changing requirements.

Survey Results

In an attempt to measure these effects, in April 1980 the Bank Administration Institute mailed a 17-question survey instrument to 849 compliance officers throughout the country. The addressees were randomly chosen from among the 7,200 (approximately) compliance officers on our records. Responses were received from 487 of those contacted; representing a 57.4 percent response rate.

The purpose of the survey was to provide a composite profile of the response of the industry to the many tasks associated with regulatory compliance. In addition, it was hoped that the survey would provide a measure of the emergence of the compliance function as a mainstream component of bank management. Also, an attempt was made to measure the dollar value of bank resources which have been committed to compliance activities. Results from the more salient questions are as follows:

Corporate Title: More than 56 percent of the respondents held a corporate title of vice-president or above, with 32 percent either assistant vice-president or first-level officer. These figures appear to hold well across bank-size categories with the exception of the under $10 million bank-asset-size category in which fully 54 percent of the respondents were president/ceo level.

Work Experience: Generally, the respondents evidenced substantial banking experience. Fully 84 percent had more than 6 years in banking, with a remarkable 26 percent exceeding 21 years. These figures hold closely across size and geographic categories.

In contrast with banking experience, most respondents had relatively little time functioning in the compliance field. One-third had one year or less compliance experience, and those with three years or less represented 74 percent of the total.

Most Difficult Tasks: By far, the most difficult task indicated by respondents was "keeping current on regulations" (90 percent).

Greatest Concern: "Consistency of regulations and forms" and "enough time to do the job" were most frequently mentioned.

Bank's Emphasis: A full 79 percent indicated that during the past year their bank's emphasis on compliance had increased.

Estimated Annual Cost: Of the categories available, more respondents chose "over $50,000" as an estimation of the annual cost of compliance activities. But, as would be expected, it was not until bank size reached the $100-250 million asset range that significant numbers began appearing in this category. (See exhibit.)

Conclusions and Recommendations

It is obvious that the banking industry continues to bear a disproportionately heavy regulations burden. Especially onerous are the civil rights and consumer protection requirements which impose significant potential liability upon the bank during the course of most transactions with consumers.

Banks have, for the most part, implemented policies and procedures which allow for systematized compliance with these requirements, but these efforts have been at great cost. These costs are both direct and indirect, with the loss of entrepreneurial corporate posture being the most significant.

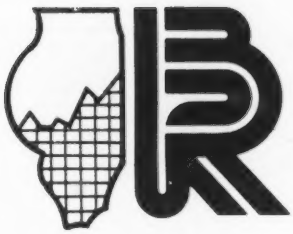
Now that "technical compliance" has been achieved, it is important for the industry to focus its energies upon developing a "proactive" relationship with both legislative and regulatory arms of the federal government. This relationship should include active individual participation of bank management in the statutory and regulatory process. The following actions, if pursued widely, could ameliorate some of the existing compliance burden while simultaneously reducing future interventionist opportunity in the financial arena: establishment of "external affairs" department, when possible, to provide a more

Annual Cost to Banks of Compliance Activities

	Total assets, April 1980 (in millions of dollars)								
	All banks	Under $10	$10-25	$25-50	$50-100	$100-250	$250-500	$500-1,000	Over $1,000
Estimation of annual cost to your bank of its compliance activities	467 100.0	12 100.0	35 100.0	63 100.0	79 100.0	74 100.0	70 100.0	47 100.0	87 100.0
Under $2,500	45 9.6	2 16.7	10 28.6	17 27.0	9 11.4	4 5.4	2 2.9	0 0.0	1 1.1
$2,500 - $5,000	55 11.8	5 41.7	13 37.1	11 17.5	14 17.7	7 9.5	5 7.1	0 0.0	0 0.0
$5,000 - $10,000	83 17.8	5 41.7	6 17.1	20 31.7	24 30.4	13 17.6	9 12.9	2 4.3	4 4.6
$10,000 - $20,000	67 14.3	0 0.0	5 14.3	11 17.5	20 25.3	15 20.3	6 8.6	4 8.5	6 6.9
$20,000 - $50,000	100 21.4	0 0.0	1 2.9	4 6.3	11 13.9	23 31.1	29 41.4	16 34.0	16 18.4
Over $50,000	117 25.1	0 0.0	0 0.0	0 0.0	1 1.3	12 16.2	19 27.1	25 53.2	60 69.0

effective dialogue with public constituencies; formation of a "social policy" committee of the board of directors to develop formal policies with regard to political, social, and economic pressures; implementation of expanded communication with all segments of a bank's local community; and substantive involvement in the statutory and regulatory process.

Only through the vigorous pursuit of such measures will banks begin to regain a meaningful voice in the determination of their futures.



Transportation Fuels Inflation

FOLKE DOVRING

The power of oil prices over industrial economies has been well illustrated by recent events. The two large waves of increase in international petroleum prices, 1973–74 and 1979–80, were followed by recessions in many countries and by major surges of inflation in the US. Yet many voices in our public debate — politicians among them — dispute the role of import prices as a major source of inflation in this country. Other industrialized nations, so the reasoning goes, are dependent on imports for much more of their oil consumption than we are, and they have less inflation.

There are two important differences between countries to account for here: the foreign exchange positions, and the uses of petroleum, especially for transportation.

TABLE 1. Commercial Energy and Gasoline: Apparent Consumption Per Capita, Selected Countries and Years

Country	Energy per capita, coal equivalent (kilograms)			Gasoline per capita (kilograms)		
	1973	1975	1978	1973	1975	1978
France	4,459	3,929	4,368	301	302	326
Germany (W)	5,828	5,408	6,015	315	330	378
Japan	3,922	3,621	3,825	188	190	213
United Kingdom	5,423	4,983	5,212	299	283	298
United States	11,789	10,878	11,374	1,371	1,346	1,421
USSR	4,705	5,087	5,500	252	280	..
World	2,003	1,950	2,074	147	147	152

Sources: United Nations, Department of International Economic and Social Affairs, *World Energy Supplies 1973-78*, Statistical Papers, Series J, No. 22, Tables 4 and 16 (and earlier issues of the same publication, for data on gasoline in the USSR).

Petrodollars and Inflation

Countries such as Germany and Japan do not run foreign exchange deficits; the US does, mainly on account of oil. Hence the currencies of such countries are not under the kind of pressure that besets the American dollar. That a large foreign exchange deficit should lead to inflation is no great mystery. The American dollar was previously shielded by its role as an international reserve currency, and so a moderate foreign exchange deficit was no burden. With our current huge "petrodollar" deficits, the reserve-currency position is in some doubt and is in any event not sufficient to stave off inflationary consequences of the deficit. Large "dollar debts" reduce confidence in the dollar in international money markets and render it undervalued. This raises the dollar prices of many imported goods, which is inflationary. It cheapens American exports which is often inflationary by making such goods more scarce on the domestic market. The foreign exchange deficit also leads to increased foreign demand for domestic assets such as land, mines, factories, housing, and so on, which is also inflationary by placing upward pressure on asset prices. In the case of the US "petrodollar" debt to OPEC countries, this foreign debt by absorbing federal bonds and Treasury notes tends to neutralize some of the effects of a federal budget deficit but replaces those effects by the parallel, and similar, effects just described.

Professor Folke Dovring, a former UN official, teaches land economics and economic development in the Department of Agricultural Economics, UIUC. His research and publications include institutional economics (land reform, distribution of income and wealth), development dynamics, productivity, and natural resource economics. Recently he has written extensively on energy problems, particularly quantity problems related to investment in new energy sources.

The Uses of Oil

The uses of oil, especially in transportation, is a more complicated subject and calls for more precise data to be understood. As will be shown later, the large size of the transportation sector in the US now contributes to inflation by restricting resources for other investment.

International statistics on energy use show the US economy as one of the most energy-intensive in the world — rivaled only by the Soviet Union, but that requires comparative measurement of national product which we cannot go into here. A few selected numbers are shown in Table 1. The prevalence of high energy consumption per capita in the United States is already evident. From 1972 to 1975, energy consumption per capita fell somewhat, but recovered by 1978. Gasoline consumption showed less flexibility.

The per capita consumption figures need to be articulated through data on per capita national product in internationally comparable prices. Conventional national accounts do this too crudely when only the international exchange rates of the currencies are used for international comparisons. Recently, however, we have been given access to revised national accounts statistics for many countries, weighted by international prices of goods and services. Some of these data, and elaborations based on them, are shown in Table 2.

Despite imperfections in the data it is now evident that the US economy is by far the most energy-intensive among those for which we have comparable information. It is easy to show from historical data series that this has been so for a long time. It is noteworthy that the energy-intensive countries include those which historically were net exporters of fuel: the US, Canada, the United Kingdom, and the Soviet Union. Historical net importers,

TABLE 2
Consumption of Commercial Energy and of Gasoline, per Dollar of Gross Domestic Product (GDP), Multilateral Concept of National Product Comparisons, 1973

Country	(1) GDP per capita	(2) Energy per $, coal eq. kilogram	(3) Gasoline per $, kg	(4) Col. (3) x 1.61	(5) Col. (4) x 1.75	(6) Col. (5) as % of col. (2)	(7) Col. (2) minus col. (5)
France	$4,709	.95	.064	.103	.180	19	.77
Germany (W)	4,791	1.22	.066	.106	.185	15	1.03
Japan	3,962	.99	.047	.076	.133	13	.86
United Kingdom	3,751	1.45	.080	.129	.225	16	1.22
United States	6,192	1.90	.221	.356	.623	33	1.27

Sources: Col. (1) from Irving B. Kravis and others, *International Comparison of Real Product and Purchasing Power*, UN International Comparison Project, Phase II (Baltimore: Johns Hopkins Press, for the World Bank, 1978), Multilateral Table 4.10. Col. (2) and Col. (3) derived from Col. (1) and data in Table 1. Col. (4) brings the heat content of gasoline into approximate equivalence with that of coal (see *World Energy Supplies 1973-78*, cited in Table 1, pp. xviii-xix; gasoline by weight has 1.61 times the 7,000 calories assumed as standard in a gram of coal. Col. (5) brings in the indirect energy used by and for gasoline engines. See R. H. Williams, ed., *The Energy Conservation Papers* (Cambridge: Ballinger, 1975).

such as France and Japan, have developed much more energy-saving economic systems. Germany, once a net fuel exporter (on account of coal), was among the more energy-intensive countries still in the 1950s, but has shown a good deal of improvement since then while still exhibiting some excess energy intensity over France and Japan.

The US still has not made much progress in reducing energy use per unit of real national product, which is another way of saying that there should still be a great deal of scope for this kind of progress in this country. The contrast between the US and other countries is especially striking in Column 5 of Table 2, which shows gasoline as coal-equivalent fuel plus the "backward linkage" of indirect energy use associated with gasoline-driven vehicles. The US apparently uses one-third of all the energy in the country in and for gasoline-powered engines. The other countries in the table use proportionately about half as much, or less, of their energy budget in and for gasoline engines. The last column in Table 2 shows the ratio of energy per dollar of national product minus the part used in and for gasoline-powered engines, which is nearly all in transportation. Now the differences between countries are much reduced. The proportion between France and the US has fallen from 1:2 (in column 2) to 1:1.65; between Germany and the US from 1:1.56 to 1:1.23, and the difference between the United Kingdom and the US has almost disappeared. This is on account of gasoline-powered engines only. If diesel-powered transportation (trucks, railways, and barges) were also identified (it is harder to separate from other uses of light refined oil) the differences between the United States and other countries would be even smaller. Transportation is evidently the main cause of low efficiency (or productivity) in the use of energy in the US. Household operation may be next. Industry, agriculture, and other business are apparently closer to the efficiency standards in other countries.

Transportation Energy

Transportation, we are often told, uses about one-fourth (or, more precisely, 26 percent) of all energy in the US, or over half the oil, which sounds impressive enough. This, however, includes only the heat value of fuel used directly to propel vehicles. To extract, refine, and transport the fuels, and to manufacture, deliver, and service vehicles, about three-quarters as much energy is used as in direct propulsion fuel. This is energy of all kinds, but given the preponderance of petroleum and natural gas in the US energy budget, these scarce fuels must take the bulk also of the "backward linkage," or indirect energy quantities. Thus, when all is included, transportation in the US uses up about 45 percent of all energy consumed in the country. This must be the sector where most is wasted and where the largest gains would be obtained by pursuing increased efficiency in the use of energy.

Once again we turn to international comparisons to illustrate the weight of transportation in the energy and capital budgets of this country. Table 3 shows selected statistics of internationally comparable national product data for 1973. Parallel data for 1970 show closely similar proportions, with differences too small to be commented upon with any confidence. A second set of analyses, the "binary" tables, compares the US with other countries one by one, averaging the price weight of each item between the two countries. Detailed results are somewhat different from those of the multilateral comparisons shown in Table 3, but the main conclusions remain the same.

Table 3 shows comparably price-weighted proportions between transportation and some other items in the US and some other countries. In conventional national product accounting, the differences between countries are less striking especially as regards transportation, because people in other countries generally pay much higher gasoline taxes. In the internationally comparable prices, differences between the US and other countries in the table are much larger. The percentage of national product used for transportation in France and Germany is less than half that in the US. Among investment goods, transportation equipment also plays a larger role in the US. This points to other transportation expenditures

TABLE 3. Use of Gross Domestic Product (GDP), Multilateral Comparison Concept, Selected Items and Countries, 1973

	France	Germany (W)	Japan	United Kingdom	United States
GDP per capita	$4,709	$4,791	$3,962	$3,751	$6,192
Thereof: [a] consumption	$2,857	$2,692	$2,252	$2,618	$4,209
= % of GDP	60.7%	56.2%	56.8%	69.8%	68.0%
Of which: transportation	$ 231	$ 237	$ 90	$ 295	$ 741
= % of GDP	4.9%	4.9%	2.3%	7.9%	12.0%
Capital formation	$1,477	$1,747	$1,514	$ 756	$1,343
= % of GDP	31.3%	36.4%	38.2%	20.2%	21.7%
Of which: transportation equipment	$ 108	$ 155	$ 108	$ 115	$ 220
= % of GDP	2.3%	3.2%	2.7%	3.1%	3.6%
Government[b]	$ 375	$ 353	$ 196	$ 377	$ 640
= % of GDP	8.0%	7.4%	5.0%	10.0%	10.3%
Subtotals of percentages: transportation plus investment in vehicles	7.2%	8.1%	5.0%	11.0%	15.6%
Capital formation less transportation equipment	29.0%	33.2%	35.5%	17.1%	18.1%

Source: Kravis and others, as cited in Table 2, its Table 4.10.

[a] Household and government consumption.

[b] Government expenses for personnel and commodities.

(for capital formation and for production of goods for final consumption) as being also larger in the US than in other industrialized countries. This confirms the suggestion already made about diesel-powered transportation also being larger in the US.

Government expenses (for personnel and commodities) are also a larger proportion of national product in the US than in France, Germany, and Japan. The difference is largest in commodities, which points to defense procurements as an important reason for this difference.

Transportation and Investment

The standing complaints that the US invests proportionately less than other industrial countries comes out clearly in Table 3, for 1973. France, Germany, and Japan, in fact invested more per capita, despite somewhat lower per capita incomes. The difference is again made somewhat larger when transportation equipment is counted apart from other capital formation expenses. The shortfall of investment (minus transportation equipment) comes close to the sums of the US overloads (in comparison with the other countries) of expenses for transportation, transportation equipment, and government expenses. This was so in 1970 and 1973. Since then, the investment picture in the US has worsened even further and is generally blamed for slow increments in productivity in this country.

It is logical that transportation should have a depressing effect on capital formation, precisely when transportation costs are rising. Transportation and capital formation both draw heavily on fuel and hardware, the latter a group of energy-intensive goods. With fuel prices rising the way they have recently, the structural imbalance of an oversized transportation sector could only be made worse.

In 1972, the US imported crude petroleum at prices averaging $2.75 a barrel. In the fall of 1980, the international prices range from $30+ to $40+. In current terms, international oil prices rose by a factor of 11 to 15 in eight years. Deflated by the implicit price deflator of the US GNP, which comes to about 180 in 1980 (1972 = 100), we get a range 6 to 8 for the real increase in oil prices in those eight years — a factor of 7 on the average. This is indeed extreme; the reality of it seems hard to grasp by people who decry a national energy policy as tending to "autarky." The proportions shown here point to the transportation sector as an albatross which weights down the US economy and renders the fight against inflation a futile effort.

Transportation and Territory

The size of the transportation sector in the US is often defended as reflecting the vast size of the country. If that were the reason, this would merely make the effort at reducing transportation expenses more difficult but it would be just as necessary. Reference to size of land area includes some illusions, however. The large area and the diversity of the US means, among other things, that this continental country has much more internal than external trade. Before the oil imports took on major scope in the last decade and a half, imports and exports each were of the magnitude of 5 percent of the national product. Smaller countries regularly have larger foreign trade balances and so must meet the transportation overheads for these. Their share in international transportation is part of their energy budgets. The size of a supply area serving a national economy has little to do with the size of the national territory. How the transportation system is organized also counts for a great deal in its efficiency.

I have noted that most of the transportation fuel in the US is gasoline, most of which is used up in cars. Most of the car traffic is not across the continent but in local routines such as commuting and shopping. Here the size of the country is not to blame but rather the organization of transportation — the "traffic machine" concept on which American cities have been expanded in the decades of cheap petroleum. Most other countries are more economically organized in this respect.

The transportation system also goes a long way in feeding on itself. Of all intercity truck cargo (ton-mile

(Continued on page 12)

Comparative Economic Data for Selected Illinois Cities, November 1980

	Building permits (000)		Electric power consumption (000,000 kwh)		Postal receipts (000)		Employment (000)		Estimated work force unemployed (percent)	
	Nov. 1980	% change from Nov. 1979	Nov. 1980	% change from Nov. 1979	Nov. 1980	% change from Nov. 1979	Nov. 1980	% change from Nov. 1979	Nov. 1980	Nov. 1979
ILLINOIS	$99,445[a]	+1.2	3,508.2[a]	+2.0	$52,412[a]	-10.3	5,066.0	-0.8	8.1	5.5
NORTHERN ILLINOIS										
Chicago	55,839	-20.2	1,700.5	+2.1	38,673	-15.3	3,185.5[b]	1.9	7.6[b]	5.1[b]
Aurora	3,668	+72.8	109.0	-17.7	578	-4.0	36.5	0.8	10.3	8.0
Elgin	3,488	+261.5	90.3	+3.6	541	-8.0	28.1	-1.1	8.4	5.0
Joliet	1,206	+11.5	401.5	+4.8	348	-4.7	34.9	-0.9	12.3	10.3
Kankakee	406	-45.2	80.9[c]	+7.2	277	+12.6	38.1[b]	-1.6	10.7[b]	7.6[b]
Rock Island-Moline	2,935	+57.0	120.2[d]	-6.2	1,547	+11.1	102.6[e]	-8.2	8.4[e]	4.2[e]
Rockford	13,953	+301.8	164.4	+3.3	958	-0.8	115.9[b]	-11.5	13.0[b]	5.6[b]
CENTRAL ILLINOIS										
Bloomington-Normal	3,992	+7.3	51.6	+12.4	894	+6.9	57.7[b]	-2.0	6.1[b]	3.3[b]
Champaign-Urbana	1,607	+37.5	52.0	-9.3	741	+20.9	79.3[b]	2.5	5.3[b]	3.8[b]
Danville	2,635	+33.4	48.2	+2.8	213	-9.0	16.3	-6.3	14.1	10.1
Decatur	2,125	-29.0	133.0	+12.5	560	+10.0	55.3[b]	1.3	11.0[b]	10.8[b]
Galesburg	70	-87.3	27.8	-12.3	150	0.0	13.5	-5.6	14.2	7.3
Peoria	1,037	-72.6	200.3	+21.2	1,471	+0.6	163.2[b]	7.4	8.4[b]	6.6[b]
Quincy	1,215	-65.9	41.8	-3.5	263	+9.6	18.4	-1.6	9.9	5.4
Springfield	2,291	-54.2	120.4	-0.3	4,080	+103.0	91.8[b]	1.3	6.4[b]	5.7[b]
SOUTHERN ILLINOIS										
East St. Louis	n.a.	n.a.	23.0	-0.9	215	+7.5	22.1	-0.5	12.1	10.9
Alton	797	+7.0	31.6	+2.9	134	+9.0	13.8	-0.7	11.1	9.0
Belleville	293	-8.4	28.0	+2.6	385	+18.1	17.5	-0.6	11.4	9.4
Carbondale-Murphysboro	1,888	-4.0	33.7	-6.1	384	+12.6	11.5[f]	-0.9	6.6[f]	5.6[f]

[a]Total for cities listed. [b]Data for standard metropolitan statistical area. [c]Includes immediately surrounding territory. [d]Includes East Moline. [e]Data for Carbondale township. [f]Data for the City of Carbondale.

Second-class postage paid at Urbana, Illinois

Economic and Business Research
428 Commerce West, 1206 South Sixth Str
Champaign, Illinois 61820

MS DARLENE MONTGOMERY
CONGRESSIONAL INFO SERVICE
7101 WISCONSIN AVE
WASHINGTON, DC 20014

Illinois Business Indexes

Item	Nov. 1980	Oct. 1980	Sept. 1980	Aug. 1980	Nov. 1979
Leading indicator (1969=100)	89.9	88.3	85.9	83.3	92.7
Coincident indicators (1969=100)	124.3	125.4	125.2	123.7	149.3
Employment - manufacturing (in thousands)	1,179.8	1,182.6	1,190.4	1,183.4	1,223.5
Average weekly hours - manufacturing	40.1	39.7	39.9	39.3	41.3
Weekly earnings - manufacturing	$338.44	$331.50	$330.77	$320.30	$309.89
Layoff rate - Chicago	0.7	0.8	0.9	1.0	1.0
Help Wanted Advertising - Chicago (1967=100)[1]	77.0	70.0	71.0	68.0	111.0
Help Wanted Advertising - St. Louis (1967=100)[1]	60.0	59.0	54.0	52.0	78.0
Ordinary life insurance sales (in millions)	$1,504	$1,711	$1,519	$1,406	$1,513
Retail sales (in millions)	n.a.	$4,154	$3,803	$3,901	$4,258
Coal production (in thousands tons)	5,018	5,195	5,372	5,278	5,017
Petroleum production (in thousands barrels)	1,900	1,975	1,868	1,855	1,840
Vendor performance (percent)	50.0	44.0	39.0	33.0	51.6
Building permits (in thousands)					
Residential housing units	2.87	3.42	3.25	2.63	2.34
Value of residential housing	$117,989	$138,076	$136,291	$111,536	$88,867
Value of nonresidential construction					
Industrial buildings	$20,721	$33,383	$25,582	$19,868	$27,900
Office, banks, and professional buildings	$49,777	$52,465	$30,354	$19,332	$61,000
Stores and other mercantile buildings	$17,309	$12,392	$17,893	$13,496	$28,939
Other	$60,167	$58,840	$34,720	$34,720	$49,884
Consumer price index					
North Central US	-	138.3	-	134.9	-
North Central/population more than 4,000,000	-	140.8	-	136.8	-
North Central/population 385,000 to 1,250,000	-	137.6	-	134.7	-
North Central/population 75,000 to 385,000	-	135.1	-	132.9	-
North Central/population less than 75,000	-	134.6	-	131.7	-
Chicago	259.9	253.7	250.1	245.2	225.8
St. Louis	253.8	-	252.4	-	225.6
Prices received by farmers	135	135	133	130	108
	1980:II	1980:I	1979:IV	1979:III	1979:II
Personal income (in millions)	$118,161	$116,226	$112,317	$112,096	$109,013

[1]Source: The Conference Board, *Help Wanted Advertising*, November 1980. n.a. not available.

(Continued from page 10)

basis) in the US, about 25 percent is petroleum fuels; another 5 percent is vehicles being transported. Counting the backward linkages of the transportation-related industries, intercity truck transportation probably is more than 50 percent in service of transportation. It follows that a reduction of other transportation expenses would automatically reduce also the demand for truck hauling. Resources could then either be saved or set free for other purposes, such as investment. The area-extensive transportation systems in American cities also call for large areas of parking space around places of work and shopping, thus expanding the physical size of cities and increasing the apparent need for transportation.

Whatever the explanation, transportation remains the principal reason for high energy intensity in the American economy. With recent and current levels of oil import prices, transportation also becomes a major cause of inflation. This will be so also under a regimen of new substitute energy sources, for these will all be expensive and cause an embarrassing burden on the American economy unless final demand for energy is strongly reduced. It is an illusion to believe that either oil imports or inflation can be brought under control without doing something serious about transportation. The very timid moves attempted so far are characteristic of the essential lack of consequence in the measures which pass for a national energy policy.